Advanced MANAGEMENT

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Basic Concepts Of Human Effectiveness In Business
by Joseph Lazar

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- The increase of competition has caused alert managements to re-examine the methods used to judge the quality of their executive personnel.

NATION'S BUSINESS, JULY 1956

THURSDAY, OCTOBER 25

APPROACHES TO MEASUREMENT OF MANAGEMENT—VALUE ADDED CONCEPT
by ***Dr. Theodore N. Beckman***, Professor of Business Organization, Ohio State University

PROFIT PERFORMANCE MEASUREMENT OF DIVISION MANAGERS
Dr. Joel Dean, President, Joel Dean Associates and Consultant, Columbia University

FORWARD PRODUCT PLANNING—A Feature Color Film demonstrating the market research behind the Ford of the Future.
Robert J. Eggert, Marketing Research Manager, Ford Motor Company

WORK SAMPLING AS A MEASURE OF MANUFACTURING MANAGEMENT
Wallace J. Richardson, E. I. duPont de Nemours & Co., and Associate Professor, Industrial Engineering, Lehigh University

MANAGEMENT OF THE ACCOUNTING AND FINANCE FUCTIONS
I. Wayne Keller, Controller, Armstrong Cork Co., Lancaster, Pa., and Past President, Natl. Assn. of Cost Accountants

WHAT IT TAKES TO BE A TOP SALES MANAGER
John M. Fox, President, Minute Maid Corp., and President, Sales Executive Club, New York

MEASURING MANAGEMENT'S REPUTATION IN THE COMMUNITY
Dr. Claude Robinson, President, Opinion Research Corporation

FRIDAY, OCTOBER 26

MEASUREMENT OF CORPORATE MANAGEMENT
A. D. Marshall, Vice President & Secretary, and in charge of Management Planning, General Dynamics Corp., New York City

MEASURING THE EMPLOYEE AND PUBLIC RELATIONS FUNCTION
F. F. Bradshaw, President, Richardson, Bellows & Henry

MEASUREMENT OF RESEARCH MANAGEMENT
Dr. J. Herbert Holloman, Manager, Metallurgy & Ceramics Research Service at the Knolly General Electric Co., Schenectady, N. Y.

MEASURING THE EFFECTIVENESS OF EXECUTIVES
John B. Joynt, Manager, Management Services, America Enka Corporation

MEASUREMENT OF MANAGEMENT IN BUSINESS AS A WHOLE
Richard Sanzo, Management Problems Specialist, and Business Analyst of Dun & Bradstreet, New York City

A LOOK AHEAD AT MEASUREMENT OF AREAS OF ACTION AND NET EFFECT
Paul E. Mills, Management Consultant, General Electric

THE PRESENTATION OF THE 1955-56 NATIONAL AWARDS OF THE SOCIETY FOR ADVANCEMENT OF MANAGEMENT WILL BE A FEATURE OF THIS CONFERENCE.

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OPERATIONS RESEARCH IN RESOURCE ALLOCATION
Chairman: **W. B. Harrison,** *Vice President, Finance, Sylvania Products Company, New York*

BUDGETING, FORECASTING AND ECONOMIC PLANNING
Dr. David B. Hertz, *President, David B. Hertz Company, New York*

ANALYSIS AND DISCUSSION OF THE PRESENTATION
Gifford H. Symonds, *Chairman, Technical Service Division, Esso Standard Oil Company, Linden, N. J., and President, The Institute of Management Sciences*

MANAGEMENT IN THE ELECTRONIC AGE
Frank F. Middleswart, *Director Management Engineering, E. I. du Pont de Nemours & Co., Wilmington, Delaware*

OPERATIONS RESEARCH IN DATA PROCESSING
Chairman: **Emil D. Schell,** *Director Applications Research, Remington Rand Division, Sperry Rand Corp., New York City*

PREPARATORY WORK AND ANALYSIS IN ARRIVING AT DESIGN OF DATA SYSTEMS
Dr. Harry Goode, *Director, Willow Run Research Center, Electronic Computer, University of Michigan*

DESIGNING A DATA PROCESSING SYSTEM FOR SALES FORECASTING AND INVENTORY CONTROL, FOR A SPECIFIC BUSINESS
Dr. Walter Murdock, *Consultant-Mathematics, General Electric Company, New York City*

UTILIZING OPERATIONS RESEARCH METHODS FOR DEVELOPMENT OF LOGICAL INFORMATION AND DECISION STRUCTURE
Dr. Melvin Salveson, *Consultant, Operations Research and Synthesis, General Electric Company, New York City*

BLENDING OPERATIONS RESEARCH AND ELECTRONIC DATA PROCESSING INTO A COMPREHENSIVE PROGRAM
Elmer Kubie, *President, Computer Usage Co., New York City*

FRIDAY, NOVEMBER 30

THE FUNDAMENTALS OF OPERATIONS RESEARCH
Dr. Russell L. Ackoff, *Director and Associate Professor of the Operations Research Group, Case Institute of Technology, Cleveland, Ohio*
Presentation of results of an introductory survey, and definition of Operations Research

THE OPERATIONS RESEARCH APPROACH
A Panel Discussion based upon the following: What is new and what is old about O.R.? Can O.R. be done if good data is not available? Where should O.R. be located in the company? How can cooperation from all departments be obtained? What kind of problems should a company begin work on? Where can outside assistance be obtained? Where can O.R. personnel be obtained? How can we select our own people for training? How can our people be trained? How can our people keep up with developments in the field? What facilities are required? Is a computer necessary? How long does an O.R. project take? How much does a project cost? What kinds of payoff can be expected? Is O.R. going to take over management? Is management's participation in O.R. required? If so, how?
Panel: **Gifford H. Symonds,** *Technical Service Division, Esso Standard Oil Co., Linden, N. J., and President, The Institute of Management Sciences;* **Roger Crane,** *Manager, Research Management Sciences, Touche, Nevin, Bailey & Smart, Detroit;* **Dr. Jack W. Dunlap,** *President, Dunlap & Associctes, Inc., Stamford, Conn.;* **Dr. David B. Hertz,** *President, David B. Hertz Co., Inc., New York City;* **Dr. Melvin Salveson,** *Consultant, Operations Research & Synthesis, General Electric Company, New York; and* **Leslie C. Edie,** *Chief, Project & Planning Division, N. Y. Port of Authority*

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Matching the Machine to the Man
Sir Robert Watson-Watt, *C.B., L.L.D., D.S.C., S.R.S.; President, Adalia, Ltd., Montreal & London*

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Chairman: **Hiram S. Hall,** *Partner, Hall and Lange, New York City*

THE DECISION MAKER
Roger Crane, *Manager, Research Management Sciences, Touche, Niven, Bailey & Smart, Detroit*
An analysis of the method by which top management makes important decisions. Certain specific decisions will be discussed in extensive detail.

THE DECISION
Dr. Jack W. Dunlap, *President, Dunlap Associates, Stamford, Conn.*
This presentation will list several important types of decisions which are made by top management, and discuss major factors affecting these decisions. Scientific theories presently available to assist management in making these decisions will be discussed.

EXECUTIVE RESPONSIBILITY FOR DECISION MAKING
Lowell H. Hattery, *Professor, Government and Public Administration and Director, Institute of Electronics In Management, American University, Washington, D. C.*
The effect on the operations of organization decision-making as aided by scientific theories, with illustrative situations where the use of scientific methods has aided the manager in improving his decisions. Checklist of techniques and principles for executives to follow.

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OCTOBER 1956
VOLUME 21 NO. 10

Production Editor: Beatrice Jones

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"Through research, discussion, publication, and other appropriate means to conduct and promote scientific study of the principles governing organized effort in industrial and economic life . . . for the general betterment of society . . ."
S.A.M. Constitution

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ADVANCED MANAGEMENT, published monthly by the Society for the Advancement of Management, Inc., 74 Fifth Avenue, New York 11, N. Y., is successor to The Society for the Advancement of Management Journal, the Bulletin of the Taylor Society and of The Society of Industrial Engineers. Reentered as second-class matter, December 23, 1949, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright, 1956, Society for Advancement of Management. Permission must be obtained for reprinting, digesting, or quotation. Subscription rates: $8.00 per year. Single copies: 75 cents (members); $1.00 (non-members). All members receive this publication, for which $4.00 of their dues is allocated. Reprints of articles readily available in quantity, price schedule on request. An index to ADVANCED MANAGEMENT is published annually, and the contents are also indexed in Industrial Arts Index, available at Public Libraries. Notification of address changes must be given four weeks in advance.

STIMULATING CREATIVITY

CREATIVE imagination is not confined to a few people. All are born with it but few use it to capacity. Psychological studies indicate that creative talents can be developed, and that individuals with high intelligence are not always the ones who produce the most original ideas.

The late Dr. Albert Einstein said, "Imagination is more important than knowledge." It is not just intelligence but how we use it that counts. Creativity is confined neither to the young nor to one's field of specialization. Some of the best ideas of history were outside the fields of the originators.

Samuel Morse, of telegraph fame, was a portrait painter.
Robert Fulton, of steamboat fame, was an artist.
Eli Whitney, of cotton gin fame, was a school teacher.
Thomas Jefferson developed some of his best ideas when he was in his 80's.

Innovation and motivation are important parts of every manager's job. What can a manager do to inspire creativity? He can:

(1) Let his subordinates and associates know that he will listen to new ideas and will try something new.

(2) Emphasize that good ideas are welcomed even in areas outside the individual's job.

(3) Make certain that he and his supervisors delegate challenging tasks to subordinates. This will cause them to stretch and give him more time for creativity. Oliver Wendell Holmes said: "Man's mind, stretched to a new idea, never goes back to its original dimensions."

(4) Encourage people to stick their necks out, to come up with a radical idea and to have determination and perseverance in carrying out these ideas.

Some managers encourage their people to write ideas down immediately, lest they be lost forever. Nothing will happen until you put the idea to work. S.A.M., at all its national meetings and many regional meetings, distributes "Idea Cards" to all in attendance for subsequent reference and follow-up on any ideas that they may pick up.

To encourage new ideas we must let our people know we have confidence in their ability in helping to solve the problem at hand. We must create a climate for creative thinking.

At General Electric, engineers who have been taught to use their imagination get three times as many ideas as those who haven't.

At the Chicago plant of the Hotpoint Company, a superintendent and two foremen using Hotpoint's brainstorming technique developed and installed an equally efficient conveyor system for $4,000 after an initial request for a $200,000 system was rejected.

One company asked its employees for new uses for its products and received 32,000 suggestions, many of which have been adopted.

A basic test for any manager is his ability to make ordinary people perform "over their heads." By trying ourselves and encouraging others to develop the art of creative thinking we will come closer to meeting this test. ■

JOHN B. JOYNT
National President

How long will these year-after-year wage increases keep coming? How long must industry continue to prepare for them, with their incidental material price increases? Some industrial executives think they will continue as long as business stays good and improved productivity can at least partially compensate for the increased costs and as long as prices can be raised. The program of perpetual inflation is rough on many companies, which must save and economize to pay the steadily increasing wages and material price increases. What is the answer? This author offers some suggestions . . .

Cost Reduction Know-How— Key to Profit Stability

by Gerald Z. Wollam
Assistant to Vice President
Elevator Division
Westinghouse Electric Company

In the case of some industries producing fundamental raw materials there is limited capacity, and in the growing economy there is seldom a surplus. In these industries manufacturing fundamental materials there seems to be little deterrent to price increases. Other industries using those materials accept these price increases, but many attempt to minimize the effect on the cost of *their* products.

In many industries there seems to be the keenness of competition. As long as the demand is strong prices can be increased, but when the demand is weak it is not possible to obtain price increases without weakening the company's position in the market. There always seems to be more productive capacity in competitive plants than is required for the market. These companies are constantly pressed by others trying to increase their percentage of the available business. With every price increase under these conditions goes the possibility of losing some of the market. But still many of these industries are continuing to make good profits in spite of annual wage increases, many forms of additional employe benefits, and annual material price increases.

How do they do it? Here are some of the answers. . . .

When Cost Reduction Programs were originally formalized the projects were obtained from suggestions offered by people located in any part of the organization, or from needed improvements observed by members of departments that were concerned with the cost of the product. Among these were the Manufacturing Engineer, the Design Engineer, the Time Study Man, the Cost Estimator, the Foreman, and others. In the main, results were *not* well coordinated and some time there was pyramiding in the reporting of the savings. When this duplication in reporting was detected there was a loss of confidence on the part of Executive Management. It is recognized that many savings have been accomplished through these programs, but without fundamental design changes they soon reached a point of diminishing returns.

With the second phase of Cost Reduction Programs came the planned design changes to obtain a better product at a lower cost. This was a planned expenditure for fundamental design engineering to obtain designs more acceptable to the customer while incorporating the latest available materials and with lower labor costs. In the course of adapting the engineering models to production and providing proper tooling, opportunities for cost reductions came to light. These were evaluated at the development or pilot plant stage and eliminated to a great degree the opportunity for cost reductions during the course of production. As the tooling became more complicated and expensive, changes during production became too expensive and more difficult to make. Recognizing this, more attention has been turned to fundamental planning for the initial design, for initial tooling, and for methods of manufacturing. This presumed that the conditions would remain about the same for the life of the design or at least for a period of years, except for oversights and errors discovered in the course of production.

It therefore follows that a company starting a new cost reduction program finds many mine run projects that can

Mr. Wollam has been with Westinghouse since receiving his B.S. degree in Electrical Engineering from the University of California in 1939. His first job with the firm was as Industrial Relations man, and he has since been a foreman of Inspection, manager of Accounting, headquarters Staff Assistant in the Accounting Department, Assistant Director of the Budget Division, Assistant Division Manager of the Radio Division, Works Manager of the Sunbury Plant, Assistant Director of Headquarters Manufacturing Engineering Department, Headquarters Director of Wage Incentives, and now Assistant to the Vice President of the Elevator Division. Mr. Wollam is a member of the Society for Advancement of Management's Northern New Jersey Chapter.

be prosecuted and from which savings can be obtained. But after such a program has been operated for a number of years the supply of projects dries up and the program reaches a point of diminishing returns. To avoid having the source of cost reduction disappear, the company must have a planned program for developing new product designs and methods that give as good or better products at reduced cost. These designs cannot be economical to manufacture unless the manufacturing methods are carefully considered while the product is still in the design state.

Cost reductions that stabilize profits are the result of long term planning; they start with market survey and end with economical distribution.

To insure that products will always be competitive and satisfy the customer's needs and desire, it is necessary to maintain a perpetual program of product improvement through long-range, fundamental design facilities improvement and cost reduction. It is not possible here to present all of the factors that influence the stability of costs and profits, but brief mention of a few of the salient contributing factors is feasible.

1. Analyze the market.
   a. Determine the available market.
      (1) What is it today?
      (2) Is it a growing market?
      (3) What will it be in the future?
   b. What is the company's reasonable to-be-expected share of the available market?
      (1) Based upon its facilities and the facilities of its competitors.
      (2) How much of that market can be taken without affecting sales prices?
   c. Can more market be created?
      (1) By product advertising and sales promotion.
      (2) By intensive sales activity.
      (3) By new designs.
      (4) By new products.
2. Engineering Research.
   a. Does the future dictate improved products?
   b. Is research necessary to keep up with the progress of the industry?
   c. Should products be made from new or better materials?
   d. Should the products have more refinements?
   e. Should the products be more automatic to save time and labor by the consumer?
3. Fundamental Product Design.
   a. Can the product be redesigned to serve the customer better?
   b. Can it be redesigned to gain better customer acceptance?
   c. Can it be redesigned to be more economical to manufacture?
   d. Would new designs create additional markets?
   e. Would new designs reduce sales resistance?
   f. Are new designs necessary to bring the product up to competitive designs?
4. Plant Site Location.
   a. Is the plant properly located with respect to the factors that influence its well being?
   b. Is it near the center of distribution?
      (1) Has the market shifted?
      (2) Does the company have a wider sales and distribution coverage?
      (3) Should the plant be located in some other territory?
      (4) Should there be a second plant instead of expanding the present one?
   c. Where do the fundamental raw materials come from?
      (1) Are they too costly because of transportation costs?
      (2) Are they always available in sufficient supply?
      (3) Is it necessary to maintain excessive inventories because of unreliable transportation or because of the distance from suppliers?
   d. Are the transportation costs reasonable?
      (1) Because of the location are the transportation costs too high?
      (2) Are there unusual freight tariffs?
      (3) Is there sufficient competition between the various types of transportation?
      (4) Would it be advisable to do some of the manufacturing near the source of supply of fundamental materials?
      (5) Could other forms of transportation be used if the plant were otherwise located?
         (a) Better trucking.
         (b) Water transportation.
         (c) Competition in rail transportation.

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By SEYMOUR MELMAN
Columbia University

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(6) Is the time for transportation vital?
(a) Does it require excessive inventories because of the transportation time from the plant to distribution points?
(b) Are large raw material inventories necessary because of the distance from supply of these materials?

e. Is there an adequate labor supply?
(1) Is the plant location in an area with a tight labor supply?
(2) Are the other industries expanding faster than trained personnel becomes available?
(3) Is the community industrially minded?
(4) Are the schools providing industrial training?
(5) Is the balance good between industry, agriculture and other users of labor?

5. Facilities Planning.
a. Were adequate facilities provided for the present products?
b. Were they planned for the quantities now being produced and those that the company plans to produce?
c. Were they planned for the anticipated growth?
d. Were they planned according to the latest known manufacturing methods?
e. Were they planned around the best available materials in the most economical form?

6. Plant Layout of Existing Facilities.
a. Is the plant laid out for the most economical flow of work through all operations?
b. Are the material handling costs reasonable? Would the improved layout reduce them?

7. Improved Purchasing Methods.
a. Are the latest procurement methods used for all buying?
b. Are materials analyzed through "value analysis"?
c. Is a program of cost reduction geared to analysis of material values?

8. Material Specifications.
a. Are material specifications properly engineerd for the use of purchasing and production?

9. Work Specifications.
a. Have work specifications been prepared for all productive operations?
b. Have these work specifications been furnished to productive operatives?

10. Job Classifications.
a. Are all positions evaluated and recorded in formal job classifications?

11. Established Standards of Performance.
a. Have standards of performance been established for all productive operatives, particularly those on which incentive is paid?
b. Have standards of performance been established for non-productive operations (expense operations)?

12. Training and On the Job Instruction.
a. Is vestibule training provided where major expansions in organization are required?
b. Is an adequate program of on the job instruction provided to adequately train people for their work?
c. Is this coordinated with the work specifications?

13. Incentive Administration.
a. Is the whole organization geared to an adequate incentive administration program?
b. Do the labor contracts provide a proper procedure for maintaining sound standards of performance?

14. Planned Distribution of the Product.
a. Does the company do enough general advertising?
b. Does the sales promotion maintain the company's position in the industry?
c. Is there adequate warehousing for distribution of the product, and is this warehousing economical?
d. Are the transportation faciilties adequate for proper distribution?
e. Is service being rendered to all customers according to the requirements of the industry and the product?

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October 27, 1956

Executive Committee Meeting—
February 16, 1957

Board of Directors Meeting—
April 27, 1957

Executive Committee and Board of Directors Meeting—
June 15, 1957

These are some of the elements of industrial design, manufacturing and distribution that must be planned and controlled to insure profit stability. They start with market surveys and end with proper and economical distribution of the product. It all has the nature of a creative program; the creation of a market, the creation of designs to satisfy that market, designs that are acceptable and offer more to the customers, designs that use more economical or better materials, designs that are readily manufactured, and designs that are easy to distribute.

PROFIT stability comes primarily through product planning, cost improvement and control. But cost reductions and cost control take many forms in the various industries. Through exceptional ingenuity, progressive companies have developed many ways for improving operating costs. Representatives of some of those companies are here today to present a wide variety of typical sources of savings in representative phases of industrial operations. Some of these will apply directly to factory cost while others show how to reduce the operating expenses of non-manufacturing departments. Many of the ideas to be presented today will have direct application in our own companies while others are thought provoking and will stimulate ideas for profit improvement and stability. With the ever-present and relentless competition in nearly every field of industry, few companies can afford to disregard the opportunity of learning how others accomplish savings and stabilize profits. Now, as the talks are presented, let us look for the application of these examples in our cost reduction and cost control applications. ■

Just what is the proper function of the assistant to Top Management? What is the correct attitude of the assistant toward his boss and his relations to the rest of the members of the organization? Much has been said and written about this sensitive spot in the organizational set-up—so much that it is difficult for anything new to be added. But this frank and objective analysis of the position, by a man who has been on the spot, may be a new approach to an old problem.

The Assistant To Top Management

by Everett H. Bellows

Assistant to the Executive Vice President
Olin Mathieson Chemical Corporation

LET'S see if something new can be said on the subject of Assistant-To-Top-Management. The position could be taken that the right combination of top-man-and-assistant would multiply that top executive's effectiveness and simultaneously build up those in the line of command. This effective assistant to top management is the assistant who wants the organization to succeed, the assistant who facilitates communication, the assistant who contributes staff effort to the resolution of problems rather than to their obfuscation and his seeming importance. Such an assistant is a minister-without-portfolio, he is fully and currently informed on operations and policy, he reflects his senior's attitudes and philosophy on corporation affairs: he is all of those things—or he is just another secretary.

Now, it is true that some top executives have assistants who carry the title but operate as secretaries and not without encouragement, be it added, from the top executive. But other and more damaging possibilities exist. Indeed, on the negative side, these points have often been scored—that assistants interfere in the chain of command, that they weaken the authority and effectiveness of the ranking subordinates immediately below top management, that they reflect the inability of top management either to do its daily job or to delegate effectively. Much else besides. All of these things can be true, and where more than one assistant is involved, they are likely to be true, perhaps certainly.

These failures, these flaws in the relationship between the executive, the assistant, and line officers, can be avoided if four cardinal principles are observed. First, the top executive really wants an assistant; second, there is mutual trust; third, the executive can and will listen; fourth, the assistant is informed. When these conditions prevail, a constructive situation exists which top management can properly exploit. Let us consider these factors in more detail.

First, the top executive consciously and knowingly wants an assistant. This is quite aside from need. Some people—and good ones, too—are "lone" players; they don't wish to share their thoughts or their information; or they don't know how to do so. There are other top executives who do have assistants—I purposely put it in the plural—because they were inherited from the previous boss, because the assistants themselves accept such an "arrangement" in lieu of resigning when the boss, through misguided charity, failed to fire them, because the boss feels more secure if attended by a few people he can alternately ignore and berate. No, first and foremost, the top executive must *want* and *expect to use* his assistant.

Secondly, there must be mutual trust between the two people involved. This quality of trust is so obviously a *sine qua non* that to labor it will lead us into a discussion of mother-love and the Boy Scout oath.

Thirdly, the top executive must be the type of man who can listen to the things he doesn't want to hear. If on occasion the assistant disagrees, or he has bad news to tell the boss, the boss must listen. He cannot, like Xerxes, have the messenger's tongue cut out, because the miscreant reports that the Greeks fight valiantly.

The fourth essential is that the assis-

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tant must be continuously informed. Doubtless a heavy share of this obligation rests on the assistant himself, but it is also true that the top man must make information continuously available. There are top executives who rival Somoan schoolteachers, reluctant to pass on their acquired knowledge lest the pupil ultimately know as much as his teacher and thus, in Somoan society, the teacher lose caste. Far and away the most effective method is for the assistant to participate in as many conferences (including all the important ones) as the day permits. The exception is, of course, a personal session between the top executive and another person whose career or personal problems are under review. Another and frequently indispensable procedure is for the assistant to live with the people who are actually doing the job. However, the value of this practice and indeed its acceptance by all the persons involved rests on the establishment of a psychologically secure relationship between the assistant and the line of command.

Let us suppose all these fine characteristics of the executive-assistant relationship do exist, then what?

Then the assistant can multiply the top executive's time; he can get answers for operating people who need them quickly; he can facilitate communication, arrange conferences, schedule plant visits, interpret staff work. Above all, he can and must *circulate and communicate.*

Very fine. But, rightly, you ask; how can this function be performed so as to avoid the common faults briefly mentioned earlier in this article?

To begin with, the assistant must, from the first day and constantly thereafter, work to strengthen line operations. He does this by contributing to the sense of security of each and every person with whom he comes in contact. After all, the assistant to the top executive has no sales quota to reach, he has no production schedule to meet, he neither grants nor withholds promotion; why then should he take any credit from any circumstance? If the proper situation obtains between his boss and himself, he needs no credit; indeed, it would be an embarrassment. On the contrary, the assistant must positively give credit elsewhere. He must build the security of others. There is nothing to be gained by challenging the line man, by dramatizing a possible shortcoming, by making anyone appear foolish. It doesn't strengthen the boss, nor put a nickel in the till.

Since the relationship of the assistant to the line operators, the research technicians, the engineers and managers must be built on mutual respect, the assistant must not pretend to knowledge he doesn't have. If he does so his usefulness will come to an abrupt end, if indeed it ever had begun to flourish. A proper humility is, in any case, good for the soul. But salvation aside, nobody knows everything. At the top level in industry today the senior executive is certain to be concerned with more than one product, more than one process, more than one plant. And there are collateral problems of research, patents procurement contracts, union negotiations, and a host of others. Even if *le Bon Dieu* knows it all, he is smart enough to keep still.

Let us return to the item "circulate and communicate" for this is of prime importance. The assistant must become so immersed in the philosophy and thinking of the top executive whom he serves that there can be no question of his reflecting that top man's views. This is not to say that the assistant unthinkingly parrots his boss, for we are talking here of *communication;* communication which rests on discriminating judgment of the applicable and the appropriate. Moreover, we are talking about relaying the viewpoint of that top executive without endlessly identifying it as such. There are areas of give-and-take where, in diplomatic parlance, the question hasn't been asked and the answer hasn't been given, yet an exchange of views has taken place. An operating man has every right to "try it on for size". And the top executive has every right not to be committed unknowingly.

Further to this same point, but in minor key, is the obvious corollary that the executive's name should not be taken in vain; or put more crudely, that the assistant must not throw his (boss's) weight around. In any case if the assistant is not accepted in his own right as a person and as a useful citizen, it is a technical knockout and the bout should be stopped forthwith.

So far we have reviewed only one half of the function of communication that the assistant carries, that is, communication outward and downward. And, to repeat, communication outward and downward is that communication which serves to let the central staff and the line operators know the boss's think-

ing—or just the sequence of events that explain to staff and line developments of special interest to them. Communication upward supplements the top executive's opportunities to obtain data or impressions or even the "feel" of a situation. Thus, communication upward is a tool to strengthen line operations and to facilitate staff contribution to the executive's twofold purpose in life: to train and to manage. And right at this point a strong word of caution. This function of upward communication has nothing to do with the FBI; it is not a job for a counter-intelligence agent; it is never a technique to make a third person appear the fool or to make him insecure. Moreover, to this functional reason we should add a second, a moral one, that of ethics: confidences, whether given freely or inadvertently, are to be rigorously honored.

Upward communication is a function of multiplying the time available to the top executive. It is a method of collecting and relaying on a more informal basis the observations and judgments of line operating people. It is also a method of distilling and interpreting staff work, especially at the Corporate level, to meet the particular needs of those operating divisions under the executive's direction. And it is, of course, a method of relating data from varied sources to give the top executive a full picture. Again a word of caution seems appropriate. Upward communication is definitely not a technique for substituting the assistant's judgment for the judgment of the operating man or the staff specialist.

(I shouldn't want to be stuffy, but it may be worth it for the record to add that the assistant must report accurately. He can screen out the trivia, including gossip, but the relevant facts must be there—all of them.)

On the other hand, there is a place for judgment and the assistant should have some views. In open conferences or in private sessions with the boss just batting ideas around, he can serve a useful function. The need to think out loud, to formulate ideas or plans more precisely, to find expression for a novel notion can frequently be met by us mortals only through the opportunity to talk. This calls for a mixture of good listening and honest judgments freely expressed. Within that framework of mutual trust which is one of those four characteristics essential to this relationship expressed earlier in this article, the assistant to a top executive can make a valuable contribution.

Finally, there is an area where the assistant is on his own. Free of the pressing responsibilities of production schedules, sales quotas, research projects, *et cetera*, he can and should survey the scene. He should take advantage of this relative freedom to get a whole view. What are the contemporary developments in the economic field? The impact of population growth? Labor supply and automation? Management development and education? The role of the Corporation in society? How will these developments affect the Corporation's objectives? Indeed, does the Corporation have realistic objectives in the light of these very developments? Does the Corporation, for example, have the understanding and respect of the communities in which it works and lives?

The assistant is privileged to raise these seemingly extraneous questions from time to time and even to suggest answers. But even here, the role of the assistant is not to be confused with the responsibility of the operating official. It is not the assistant's privilege to plan, but only to encourage others to plan, to facilitate that planning by asking, "have you thought of this?"

Perhaps at this point it would be useful to summarize. First, be it noted we are discussing the role of an assistant to a top executive in a modern-day Corporation. What has been said would not apply in many other situations—for example, an assistant to the production manager. Second, we are talking about one general assistant, not several. If a top executive has an assistant *for* public relations, or an assistant *for* sales, he has additional department heads with or without staffs, and with or without title. Again, if a top executive has several general assistants, he has downgraded his nominal department heads and division managers, and in any case, he has chaos and dissatisfaction. Caesar could divide all of Gaul into three parts, but he refrained from setting two or more commanders in each area.

Assume, then, one general assistant to the top executive; assume trust and appropriate competence. Under these circumstances that assistant will multiply the executive's time, he will contribute to the effectiveness of line officials, he will facilitate communication throughout that institutional framework we call the modern Corporation. ■

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The author demonstrates the successful application of the Work Sampling Technique at executive level, showing the method used to bring to light solutions to problems which are usually buried beneath the daily routine and in the work patterns of persons who are too busy and have too little time to reflect on their own personal work habits.

Work Sampling At Executive Level

by J. Bruce McNaughton

General Sales Manager
Special Products Division
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Columbus, Ohio

IN treating the subject of work sampling at the executive level it might be well to first define this concept before spending time discussing it. Work sampling is a specialized application of the sampling theory and practice to work patterns. The statistical techniques applicable to this type of problem would, in general, be those falling within the scope of the small sample method. The general conditions for sampling require that it be set up in such a manner that each function or attribute being studied within the defined universe shall have an equal chance of being included, and the observation and recording of one shall in no way affect the observation and recording of another. While in large samples there is no assumption concerning the distribution of the measurements, in small sample theory the distribution of measurements is assumed to be normal and to follow a normal distribution curve.

My concept of work sampling at the executive level is one to which the small sampling method would apply. By defining the scope of a project as one which would cover the normal activity pattern of one or a group of executives, it would be one which would fall within the concept of this discussion. After this has been done, there are three general steps to be followed. The first is to make random recordings of the observed actions of the individuals involved in the study. These recordings must cover a span of time long enough to include all activities taking place while the individuals are "on the job" regardless of the significance of the acts. Secondly, the data should be analyzed by a statistician who should develop the normal activity pattern. Thirdly, this activity pattern should then be interpreted by a specialist in the field of knowledge required by the problem definition.

The above described technique is not new even though its application to the solution of executive level problems is a relatively new concept. Sampling in the field of opinion polls and marketing studies are familiar to business management and to a large proportion of the public. The findings of the Gallup Poll and the Hooper Rating of popular television programs are good examples that are familiar to the newspaper reading public. Marketing studies are well known tools in the hands of advertising agencies and sales executives. Statistical quality control techniques are familiar to manufacturing executives and their inspection departments. The ratio-delay technique is a tool in the hands of time study engineers for handling complicated idle time problems, both in factory operations and in office work. The ratio-delay study technique is a specialized application of work sampling. An excellent discussion of work sampling methods of analysis is given by Mr. George Gustat in the S.A.M.'s 10th Anniversary Proceedings - Time Study Methods Conference.

There are several practical reasons for using sampling methods. Sampling reduces the time required to arrive at a reasonably accurate solution to a complex problem involving many variables.

J. BRUCE McNAUGHTON

Mr. McNaughton began his service with The Jeffrey Manufacturing Company in 1946 as manager of Industrial Engineering, became General Sales Manager of Special Products Division in 1953. A graduate of the U.S. Naval Academy, he served in the Bureau of Naval Ordnance from 1941 to 1945. From 1934 to 1941 he moved up from Engineering Trainee to Assistant Plant Superintendent at the Linde Air Products Company, unit of Union Carbide Carbon Corporation. Mr. McNaughton also has a B.S. and M.E. from the California Institute of Technology. He is the Vice President of the Society for Advancement of Management's Central Region, and a Past President of the Columbus Technical Council.

Secondly, the cost of solving the problem is less by sampling methods than by handling 100 percent of the data—such as 100 percent inspection. Lastly, it permits a practical solution to problems that otherwise would remain unanswered.

The number of problems which arise within the executive family of a business that lend themselves to a solution by work sampling methods are limited by necessity. In the first place it would be a problem whose solution required the accurate knowledge of the activity pattern of an individual or group of individuals working together. It should be a problem, the data for which can be collected while both the observer and the person being observed are "on the job," the normal routines remain undisturbed and the period of the study is typical. This latter is important because within the business year there are special periods such as vacations, large sales meetings, shutdowns due to strikes, during which the measurements would have no validity. In addition, it must be a project whose purpose and significance is known and understood by all those who participate, both the observer and the observed. If this is not a condition then it is not work sampling but an investigation by sleuthing which is not within the purpose of this discussion.

An illustration of the type problem on which work sampling could shed some light is the study of the activity pattern of the executives of a company which has been experiencing a high incidence of health casualties. Assume that the regular physical examination program indicated normal health for the group but in the past the pressure of the company's normal business may have led to serious health problems. An approach could be made to a solution by setting up a program of activity recordings to be made by the secretary of each of the executives being studied. She would be required to make a minimum number of random observations covering the activities of an executive over the period of the entire work day, whatever its duration. These recordings would be continued for the period of time necessary to permit the normal cycle of activities to repeat several times. The raw data, so collected, could then be turned over to a statistician who could convert the data into a normal activity pattern. This activity pattern could then be studied and interpreted by a competent specialist in the field of Industrial Medicine, whose conclusions on the work content of each job studied would be a clue to possible causes of the health difficulties. By changing the objectives of the study, using the same data but having it studied by a specialist in the field of Business Organization, a set of conclusions could be drawn relating to span of control and executive relationships.

The successful application of this technique requires open-mindedness and objective thinking of the highest degree within the executive family. Work sampling at the executive level is a technique which has a place in the tool kit of modern business managements. It will bring to light solutions to problems which are deeply buried in the daily routine and in the work patterns of persons who are too busy and have little time to reflect on their own personal work habits. Proper handling of this technique can lead to greater effectiveness in the operations of the executive family. In the hands of responsible managers and specialists, it is a technique which bears thoughtful consideration. ■

SOME CRITERIA OF A WELL-MANAGED COMPANY

A GREAT deal of time, energy and money has been and is being invested by business organizations on "management development" efforts. Perhaps it would be useful to ask ourselves a rather obvious and simple question: "Why does management make this investment?" The equally obvious answer is that in our society it takes "good" management — effective, forward-looking and "smart" management — to survive and forge ahead in the rivalry to produce goods and services that customers want at prices that are competitively reasonable. It takes a lot of know-how of various kinds to get men, machines and money operating together to achieve not only material profit for a business, but to provide long-run stability and growth.

How can we tell whether the managers of a business are doing well both in the present and *for the future?* What are the criteria or tests of a well-managed company? What seems needed for the long-run success of a company in today's complex society? If you were trying to judge the relative strength, vitality and effectiveness of several business organizations, what standards would you use for making a judgment? What would you like to know about a company in which you were considering the investment of your own work-life? And what intangible factors would you consider in appraising the overall real worth of a business?

There is no universally acceptable yardstick for measuring the "goodness" or effectiveness of a business organization. But below are a set of criteria which may stimulate your thinking about what it takes to bring about a truly first-rate company. What would *you* add or subtract from this list? What is *your* philosophy and observation with reference to the major characteristics of a well-managed company?

1. Growth of profits compared with the industry trend (rather than percentage of profit on gross business) and continued comparatively favorable growth and profitability over the long run; competitive strength and resource, including adequate capital for sound expansion or improvement of operations.
2. Maintenance of good relations with customers, employees, stockholders, the public and the government; dependability and integrity in promises, performance and intent.
3. Alertness to challenge, opportunity, problems and changing conditions; an attitude of constant interest in improvement of the organization; improvement of its products, its services, its structure, its facilities, its techniques, its performance standards, its human resources and its spirit . . . coupled with at atmosphere that makes for ease in exchanging and communicating ideas.
4. Assurance of an adequate and continuing market for the company's products or services (which includes fair pricing), along with timely development of saleable new products or services; maintenance of an adequate program for long-range product research and development work.
5. Reasonably sufficient defense-in-depth of key personnel; enough executives, supervisors and highly skilled personnel to meet foreseeable needs; generally superior manpower competence, with a program for continuing challenge and development of these persons, both as individuals and as an organizational team.
6. Thoughtful formulation and appropriate communication of needed objectives, policies and integrated plans for the future, coupled with controls that enable management in particular and all personnel in general to know soon enough how the plans which concern them are coming out, thereby permitting timely revision or remedial action if needed.
7. Use of production facilities to somewhere near full capacity at least a fairly large percentage of the time.
8. Possession of a relatively superior degree of *esprit de corps* which causes an organization to drive forward interestedly, patiently and unceasingly . . . in a mutually supportive team spirit . . . with the executives in particular and as many members as possible enjoying their work and the process of group effort.
9. Reputation for consistently distinguished leadership in its field, and a firm policy of undertaking only those kinds of work or service which the organization can do (or get done) in a relatively superior manner.

If a company meets the above nine criteria, it probably has a quality of leadership, organization, "can-do" spirit, desirable end-product and collective horse sense that will enable it to grow soundly, to prosper, and to derive the deep satisfaction of creative accomplishment in the process.

Edward M. Glaser, Ph. D.

The growth of labor unions and the development of personnel administration have attracted a great deal of attention in recent years. This study of the extent of unionization and of specialization in the handling of personnel problems in the South is an outgrowth of that interest.

Unions And Personnel Departments In Southern Industries

By H. Ellsworth Steele, William R. Myles and Sherwood C. McIntyre

Alabama Polytechnic Institute
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IN THIS study the authors attempt to answer these questions: To what extent have unions succeeded in organizing southern industrial plants? Does the degree of unionization vary from industry to industry within the South? How is unionization related to size, personnel specialization (i.e., the use of either full-time personnel workers or of organized personnel departments, or both), company structure and the regional location of company headquarters? To what extent have southern plants as a group—and in particular industries—specialized for handling personnel problems? Does specialization in personnel administration vary with plant size, unionization, company structure and the location of company headquarters? These are the questions to which we have sought answers.

This paper is based on data gathered for a broader study of personnel practices in the South. The information presented covers 664 southern plants in all types of industries. It has been drawn primarily from questionnaires returned by cooperating plants which are scattered from Maryland to Louisiana.[1] These plants employ approximately one-half million workers. The material thus obtained has been supplemented by interviews with plant officials and by reference to trade directories.

Important characteristics of the plants studied are given in columns one and two of Table 1. In this table the individual industries are arranged in order of ascending plant size, as measured by the number of employees in the median sized responding plant in each industry. The table also shows the number of plants in each industry which returned questionnaires.

There are a number of limitations to the following analysis which should be noted. First, questionnaire items may be misunderstood, answered hastily and inaccurately, or answered so as to present the respondent in a favorable but incorrect light. Second, the number of plants in each of six of the industry groups—meat, mining, chemical, knitting, paper-pulp and synthetic-fiber—is less than twenty. Conclusions based on the larger samples are more reliable. Third, analysis of the returns from Alabama plants, on which additional data are available, indicates that a higher proportion of large plants than of small plants returned questionnaires. Finally, each of the factors under investigation —unionization, personnel specialization, size, company structure, and location of company headquarters—are interrelated.

Previous studies of unionization in the South have focused on the number of members in each of the various unions.[2]

[1] *The plants selected were* 214 *which were represented at the* 1951 *Southern Industrial Relations Conference in Blue Ridge, North Carolina,* 874 *which were listed in the Alabama State Chamber of Commerce's* Industrial Alabama *as employing* 50 *or more workers,* 57 *Alabama dairies and* 50 *Alabama fertilizer companies. Of the plants sent questionnaires* 56 *per cent responded.*

[2] *Cf. Frank T. DeVyver, "The Present Status of Labor Unions in the South*—1948," The Southern Economic Journal, *July,* 1949.

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WILLIAM R. MYLES is Assistant Professor of Economics and Business Administration at Alabama Polytechnic Institute. He is a three-time recipient of Research-Grant-In-Aid from Auburn Research Foundation. Mr. Myles also has many published articles to his credit.

The data we present provide the basis for an estimate of the proportion of all southern plants and of the plants in selected southern industries, in which unions have gained some foothold. Such estimates should be considered as probable upper limits because, as we have indicated, the returns were biased in favor of large plants, which the unions select as prime targets. It should also be remembered that some of these plants are unionized only "in part" whereas others are unionized "in whole."

The varying success which the labor movement has had in its attempts to organize the southern industries studied is shown in Table 1. Of the plants included in the general survey, 43 percent are organized in part or in whole.[3] These unionized plants employ 65 percent of the workers covered by the survey. Examination of the figures for the separate industries reveals that a majority of the mining, chemical, foundry, paper-pulp and synthetic-fiber plants are organized. These are the industries with the larger sized plants (as measured by the median) with the exception of the garment, knitting, and spinning and weaving industries.

At the other extreme, fewer than 25 percent of the lumber manufacturing, garment, and spinning and weaving plants are unionized. Each of these industries is characterized by relatively low amounts of capital invested per productive worker.[4] Thus, according to some personnel men we interviewed, their plant facilities may be moved or duplicated if necessary to combat unionization. Furthermore, many lumbering and spinning and weaving plants are located either in company towns or in isolated communities little exposed to unionization.

In the fertilizer, dairy, meat, and knitting industries, the degree of unionization lies between these two extremes. The first three of these industries are customer-oriented and hence tend to locate their plants in the larger towns and cities where they are more readily accessible to union organizers. The average size of their plants is small, however.

Note again that the figures in Table 1 probably overstate the extent of unionization, because the larger plants appear to be more fully represented in the samples than the small plants.

The association of unionization with size, personnel specialization and company structure is also analyzed in Table 1. As we have noted, these factors are interrelated, yet the casual relationship is not certain. For instance, personnel men we interviewed were quick to contend that specialization in personnel administration results from unionization, not the opposite.

Plant size: That unionization is greater in large plants than in small ones is especially clear.[5] The differences between the high figures for the large plants and the low figures for the small plants are statistically significant for all of the plants in the general survey and for the fertilizer, meat, and spinning and weaving industries.[6] Only in the mining and the paper-pulp industries do the small plants report higher percentages of unionization.

In large plants it is difficult for management officials to maintain the close personal relationships with their employees which prevail in small organizations. Top management tends to become separated from the workers by a barricade made up of lesser officials who filter out bad news going upward, red tape which discourages communications upward and downward, the many demands on management time and the increasing social distance between management and workers as symbolized by the contrast between the workshop and the furnishings of the president's office.

[3] *Six plants failed to answer the question on organization, hence the number answering is* 594.

[4] *Capital invested per productive worker in* 1949 *was* $4,614 *for lumber and lumber products;* $3,149 *for apparel and products made from fabrics;* $5,702 *for textile mill products; and* $9,429 *for total manufacturing.* The Economic Almanac, 1953-1954, *published for the Conference Board by Crowell Company, New York, p.* 316.

[5] *The dividing line used to separate the "small" plants from the "large" plants differs from industry to industry because of the varying sizes of the component plants. The dividing number was* 500 *for all the plants in the general survey, the foundries and the spinning and weaving plants;* 30 *for the fertilizer plants;* 50 *for the dairies;* 100 *for the meat and lumber manufacturing plants;* 250 *for the garment, mining, chemical and knitting plants; and* 1,000 *for the paper-pulp and synthetic-fiber plants.*

[6] *The differences were tested by Chi Square and were significant; i.e., the differences found would occur by chance fewer than five times if a hundred different pairs of samples of constant sizes were drawn from the same populations.*

TABLE 1

EXTENT OF UNIONIZATION IN CLASSIFIED PLANTS IN SELECTED SOUTHERN INDUSTRIES

Industry	Number of Plants	Median Number of Employees	Percentage Unionized in Part or in Whole: All	Size*: Small	Size*: Large	Personnel Specialization: Absent	Personnel Specialization: Present	Company Structure: Single-Plant	Company Structure: Multiple-Plant
All plants in general (1952) survey	600	191	43	36	58#	31	55#	26	55#
Fertilizer**	27	20	31	7	64#	37	0	11	75#
Dairy**	37	26	35	23	53	28	50	29	46
Meat	12	80	42	14	80#	25	75	50	40
Lumber manufacturing	55	85	11	6	19	7	30#	12	8
Garment	29	150	14	10	29	14	12	7	23
Mining	11	150	91	100	67	88	100	a	..
Chemical	18	175	78	64	100	71	71	ob	82
Knitting	15	215	27	20	30	14	38	14	38
Foundry	31	300	71	65	82	55	83	67	75
Spinning and weaving	104	822	23	10	29#	13	26	0	28#
Paper-pulp	14	1,450	79	100	70	a	..	100b	77
Synthetic-fiber	13	3,000	69	50	73	a	..	a	..

* Size of "small" and "large" plants varies; see footnote 4 for definitions.

** Alabama only. Survey made in 1954.

a—There are no plants in this category, union or non-union.

b—There is only one plant in this category.

Difference significant at the 5 per cent level.

Not only are the opportunities for misunderstanding more plentiful in large plants, but the attractions for union organizers are greater. Thus, it is not surprising to find this close relationship of greater size and wider unionization.

Personnel specialization: Unionization appears to be more widespread in plants which have specialized in handling personnel problems than in plants which have not. Exceptions to this generalization, as seen in Table 1, are found in the fertilizer and garment industries. No differences are found for the paper-pulp and synthetic-fiber plants surveyed because all of these plants, union and non-union, either have full-time personnel workers or organized personnel departments, or both. Statistically significant differences are found for all of the plants in the general survey and for the lumbering industry. These differences are not hard to explain. Once a union enters the plant, worker grievances are brought forceably to management's attention. The need for definite, uniform and clear-cut personnel policies becomes evident. To meet this need, and to overcome some of the problems of greater size which probably contributed to unionization in the first place, top management frequently turns to the personnel specialist.

Company structure: Plants which belong to multiple-plant firms (i.e., firms with two or more plants) are more likely to be unionized than are single-plant firms, according to the data in Table 1. The meat, lumbering and paper-pulp industries are exceptions. It is noteworthy, however, that there are no single-plants among the mining and synthetic-fiber plants surveyed and only one single-plant in the chemical and paper-pulp groups. Statistically significant differences emerge for the 600 plants in the general survey and for the fertilizer and spinning and weaving plants.

As we have already seen, wider unionization is associated with greater plant size and with specialization in personnel administration. It is possible, therefore, that the differences between single-plants and multiple-plants found in Table 1 are due to these factors rather than to differences in company structure. To check this possibility the comparisons given in Table 2 were developed. These figures reveal that when single-plants are contrasted with groups of multiple-plants *comparable in size and in personnel specialization*, unionization is clearly greater in the multiple-plants.

THAT unionization should be higher in plants of multiple-plant firms than in single-plant firms seems logical to personnel men who were queried on the point. Once a union gets a toehold in a multiple-plant firm, it is easier to organize other units of the company because management resistance is less and worker acceptance greater. The barriers have been broken. Company management is already engaged in collective bargaining. Local workers are ready to follow their fellow employees in other company plants into the same national union so that they too can be represented in negotiations.

Location of company headquarters: One interesting question on which the data in Table 2 throw light is the relative extent of unionization in branch plants of southern firms as contrasted with branch plants of non-southern firms.[7] In each of the two comparisons of groups of plants *comparable both in size and in personnel specialization*, the degree of unionization is higher in the branch plants of non-southern concerns. These figures strongly suggest that unions enter the northern plants of national firms and flow through the company "arteries" to the southern plants. We have already observed that unions find it easier to penetrate branches of multiple-plant companies than to win their way into the single-plant firms.

Industrialization and personnel administration have developed more slowly in the South than in the North. The growth of southern industry in the last several decades has been the subject of numerous studies. The wider use by southern plants of systematic procedures for handling personnel problems is also of interest.

Of all of the plants in the general survey, 52 percent reported that they employed full-time personnel workers or had organized personnel departments, or both, as can be seen in Table 3.[8] A majority of the plants surveyed in the chemical, knitting, foundry, spinning and weaving, paper-pulp and synthetic-fiber industries also stated that they use specialization in coping with their personnel problems. It is noteworthy that these are the six industries of the twelve studied which have the largest plants.

Only in the fertilizer and lumber industries did less than 25 percent of the firms claim to have personnel specialization. The percentages for the dairy, meat, garment and mining industries fall between these two extremes.

These figures might be taken as an upper limit for an estimate of the extent to which personnel specialization is used in each industry group. The actual extent of use is probably less than these figures would indicate, because large plants are over-represented in the samples. This bias is important because size is apparently associated with greater use of personnel specialization.

Many factors must form the background of any management decision to employ full-time personnel workers or to organize a personnel department. We shall examine four of these factors.

Plant size: According to the data given in Table 3, personnel specialization is closely associated with greater size. Even the figures for the paper-pulp and synthetic-fiber plants may support this conclusion, although they show no differences between small and large plants. It seems probable that in these industries even the small plants are so large that they must specialize in order to adequately meet their personnel prob-

[7] *As used in this table, the South consists of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia. Maryland and Washington, D. C., are considered as falling outside of the South.*

TABLE II

PERCENTAGE OF UNIONIZATION IN SELECTED GROUPS OF COMPARABLE SOUTHERN PLANTS WITH 50 TO 499 EMPLOYEES

	Company Structure		Location of Company Headquarters	
	Single-plant	Multiple-plant	Branch—South	Branch—non-South
Plants without personnel specialization.....	26	49#	50	66
Plants with personnel specialization.....	34	54	47	54

#Difference significant at the 5 per cent level.

TABLE III

PERCENTAGES OF CLASSIFIED PLANTS IN SELECTED SOUTHERN INDUSTRIES WHICH HAVE PERSONNEL SPECIALIZATION

Industry	Size*			Unionization**		Company Structure	
	All	Small	Large	Non-union	Union	Single-plant	Multiple-plant
All plants in general (1952) survey...	52	33	94#	41	66#	26	69#
Fertilizer***	24	33	10	33	0	28	14
Dairy***	32	37	28	25	46	25	46
Meat	33	29	40	14	60	0	40
Lumber manufacturing	23	13	29	15	50#	15	33
Garment	37	30	57	35	50	23	54
Mining	27	25	33	0a	30	0b	..
Chemical	61	36	100#	50	64	0a	65
Knitting	53	25	86#	45	75	29	75
Foundry	63	42	100#	38	73	47	80
Spinning and weaving	78	52	89#	75	88	50	84#
Paper-pulp	100	100	100	100	100	100a	100
Synthetic-fiber	100	100	100	100	100	0b	..

* Size of "small" and "large" plants varies; see footnote 4 for definitions. # Difference significant at the 5 per cent level.
** In part or in whole.
*** Alabama only. Surveyed in 1954.
a— There is only one plant in this category.
b— There are no plants in this category.

lems. In nine of the eleven remaining comparisons, the large plants claim wider use of personnel specialization. Only the fertilizer and dairy plants run counter to this tendency. The differences for all of the plants in the general survey and for the plants in the chemical, knitting, foundry and spinning and weaving industries—industries with larger plants — are statistically significant.

The same factors which make large plants fertile ground for unionization provide opportunities for personnel specialists to assist top management. Personnel men can help bridge the growing distance between workers and management at all levels through their skilled advice and counsel. Also they can assume many of the personal contacts and responsibilities which management is able to handle directly in small plants.

Unionization: The relationship between unionization and personnel specialization is also close. Once again no differences appear for the paper-pulp and synthetic-fiber plants, all of which have personnel specialization. A higher percentage of the union plants than of the non-union plants in each of the other comparisons, except that for the fertilizer plants, have specialized in personnel administration. For all of the plants in the general survey and for the lumbering plants the differences are statistically significant. Once the workers become organized, management is compelled to increase attention to problems of human relations. In addition, management must cope with a new organization anxious to try its strength and under sharp pressure to sell itself to the new members. No wonder management calls on the personnel specialists for help.

Company structure: The influence of company structure on the use of personnel specialization stands out in the figures in the last two columns of Table 3. There are no single-plants among the mining and synthetic-fiber plants surveyed; therefore, only eleven comparisons are presented. Once again no difference appears for the paper-pulp plants, all of which have personnel specialization. In nine of the remaining ten comparisons the multiple-plants report a higher percentage with personnel specialization than do the single-plants. The fertilizer industry provides the only exception. For all of the plants in the general survey and for the spinning and weaving plants, the differences are statistically significant. Data in columns one and two of Table 4 show the impact of company structure on groups of plants selected so as to be *comparable in size and in unionization.* In both of these comparisons the multiple-plants report significantly higher percentages employing personnel specialization.

Management in the multiple-plant firms must substitute regulations, procedures and reports for the personal relationships which tie the single-plant firms together. Companies with branch plants must have "more manuals to pass around," as one personnel man puts it. In order to meet this challenge, the multiple-plant firms specialize.

Location of company headquarters: Which group of plants will make the greatest use of personnel specialization,

TABLE IV

PERCENTAGE OF PERSONNEL SPECIALIZATION IN SELECTED GROUPS OF COMPARABLE SOUTHERN PLANTS WITH 50 TO 499 EMPLOYEES

	Company Structure		Location of Company Headquarters	
	Single-plant	Multiple-plant	Branch—South	Branch—non-South
Non-union plants	18	50#	44	69
Union plants	24	55#	39	58

#Difference significant at the 5 per cent level.

the southern branches of non-southern firms, or the southern branches of southern firms? Data in columns three and four of Table 4 give the answer. Here are two comparisons of groups of plants *comparable in size and in unionization.* In both comparisons the branches of non-southern firms lead in the use of personnel specialists. In view of the longer industrial history of the North and of the wider use of personnel administration there, these differences are to be expected.

Conclusions: From this analysis several conclusions may be drawn. First, as Table 1 shows, of all the plants included in the general survey, 43 percent are unionized. Two-thirds or more of the mining, chemical, foundry, paper-pulp and synthetic-fiber plants surveyed are unionized. Fewer than one-fourth of the lumber, garment and spinning and weaving plants have unions. Plants in these last three industries have in common a low capital investment per productive worker which may help account for the low degree of unionization. For the South as a whole, and for the specific industries studied, the actual extent of unionization is probably less than we have found because of the over-representation of the larger plants in our study samples.

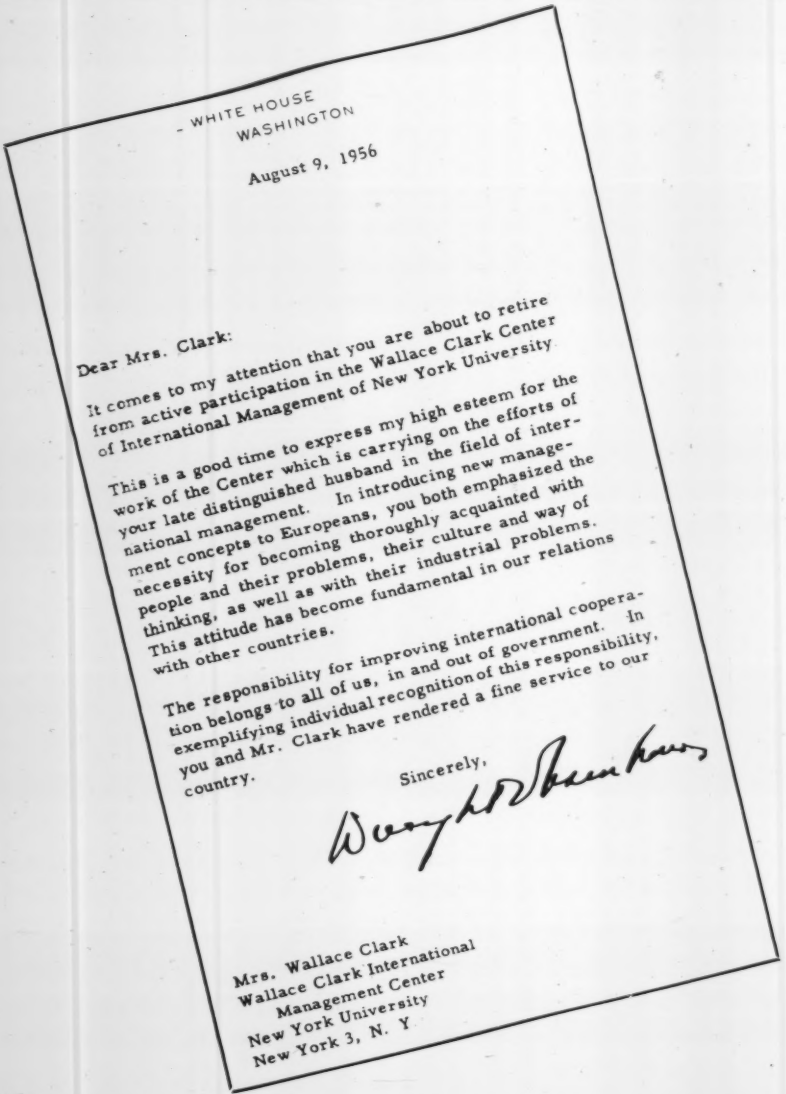
Second, unionization is generally higher in large plants, in plants with personnel specialization, in multiple-plant firms, and in branch plants with headquarters outside of the South than in their opposites (see Tables 1 and 2).

Third, as is revealed in Table 3, of all the plants in the general survey, 52 per cent report full-time personnel workers or organized personnel departments, or both. Nearly two-thirds or more of the chemical, foundry, spinning and weaving, paper-pulp and synthetic-fiber plants make the same claim.[9] Fewer than one-fourth of the fertilizer and lumber plants have personnel specialization. Once again, these figures are probably too high for the South as a whole because of the size bias in our samples.

Fourth, in most industries greater use is made of personnel specialization in large plants, unionized plants, multiple-plants and plants with headquarters outside of the South, than in the plants with which they are compared (see Tables 3 and 4).

In summary, our findings lend support to generally held views in industrial relations. The social distance between workers and management officials in large plants and in multiple-plant companies, and the complexities of the operations of such firms, encourage the growth of unions. These three factors in combination lead management to specialize in order to meet the personnel problems involved. Finally, the influence of wider unionization in the North than in the South, and of earlier industrialization, can be seen in the wider unionization and greater use of personnel specialization by southern plants with home offices outside of the South than those with home offices in the South.

[9] *The paper-pulp plants surveyed range from* 330 *to* 2,700 *employees and synthetic-fiber plants from* 400 *to* 3,890.



WHITE HOUSE
WASHINGTON

August 9, 1956

Dear Mrs. Clark:

It comes to my attention that you are about to retire from active participation in the Wallace Clark Center of International Management of New York University.

This is a good time to express my high esteem for the work of the Center which is carrying on the efforts of your late distinguished husband in the field of international management. In introducing new management concepts to Europeans, you both emphasized the necessity for becoming thoroughly acquainted with people and their problems, their culture and way of thinking, as well as with their industrial problems. This attitude has become fundamental in our relations with other countries.

The responsibility for improving international cooperation belongs to all of us, in and out of government. In exemplifying individual recognition of this responsibility, you and Mr. Clark have rendered a fine service to our country.

Sincerely,

Dwight D. Eisenhower

Mrs. Wallace Clark
Wallace Clark International
Management Center
New York University
New York 3, N. Y.

Mrs. Wallace Clark Honored By President Eisenhower

MRS. WALLACE CLARK

PRESIDENT EISENHOWER has joined with the many friends of the Wallace Clark Center of International Management, of New York University, in sending congratulations to Mrs. Wallace Clark upon the eve of her retirement as head of the Center.

At the formal opening of the Center's new, expanded quarters at Gallatin House, 6 Washington Square North, New York City, on October 9th, Mrs. Clark will preside at the all-day Open House and introduce visitors to the new Director, Dr. Lincoln Clark (unrelated), who will replace her as head of the Center.

Mrs. Clark especially invites members of the Society for the Advancement of Management to the opening. To those members who may not be in New York on the day of the Open House she extends the hope that they will visit the center during a future trip to the city.

All levels of management can be seriously handicapped by poorly transmitted communications, written or oral. Weak and badly interpreted information can bring about bad decisions and adversely affect company policy, administrative procedures and organization morale. So this author states, then demonstrates a system of improving communication which can be applied to any business.

The DIDO Technique For Effective Communication

By Felton J. Koch

Home Office Claim Department
The Prudential Insurance Company
Newark, N. J.

WHETHER you are an executive, supervisor, or clerk you spend the greater portion of your time communicating. Therefore, if you improve your communicative technique, you improve your effectiveness.

Poorly written or oral communications handicap all levels of management. Executive or high level responsibilities of administration and policy making require strong and reliable lines of communication. Weak and unreliable information may cause bad decisions affecting company policy, administrative procedures, morale within your organization, consumer reactions, and public relations.

How do you improve communications to the upper echelon of business management? Educate the employees in the supervisory and junior executive levels to improve their reports. Encourage them (1) to carefully analyze the problems, (2) do some testing, (3) suggest remedial solutions, (4) explain how the proposed solutions can be put into action, and (5) outline how much they will cost. They should write these reports in simple, candid language, without any degree of ambiguity, fuzzy meaning, hedging attitude, etc. The reports should be detailed, descriptive, factual, without adjective intonation to impart inferential or judgmental comment, and devoid of any emotional overloading. When reports meet these standards they permit the executive to make impartial and unprejudiced evaluations and reach decisive conclusions.

Knowing that language is our tool of communication, it must be 'fog-free', clear and understandable, to accomplish its purpose. The communicative efforts of executives should be as careful and lucid as the efforts they demand of their subordinates.

Do your co-workers ever ask what you mean by something you say or write? Do they fail to understand your instructions? Do they sometimes find it necessary to re-read your letters or memoranda to interpret their meaning? Do they offer excuses for not doing what you requested because they were confused by your statements? Affirmative answers to these questions denote communication failures. Successful management demands that you say or write what you mean, so your listener or reader understands your message in the way you want it understood. You must constantly exercise an awareness that your words may have a different meaning for the other person. Recognizing this ever-present situation, which often leads to misunderstanding, perhaps you will communicate more effectively if you use the technique of '*D I D O*'—Define, Index, Date, and Orient.

Define

You cannot communicate effectively on a verbal or symbolic level, when either talking or writing, unless your words and symbols have established definitions that are known to you and your listener or reader. The words or symbols used for communication must create substantially the "same" meaning or interpretation in the mind of the listener or reader as intended by the speaker or writer. When you do not accomplish that objective you fail to communicate.

Without a commonly understood defi-

FELTON J. KOCH

Mr. Koch has been with the Prudential Insurance Company of America for the past fifteen years. Previously he was District Manager in Columbus, Ohio, for the American Service Bureau of Chicago, and the Hooper-Holmes Bureau, Inc., of New York City. Mr. Koch has long been a student of Semantics, studying the subject at Columbia University in New York and at the Institute of General Semantics.

nition for a word or symbol, these instruments of communication become meaningless. Arithmetic symbols have an almost universal acceptance and interpretation, such as 2 plus 2 equals 4. The language of matematics and other scientific symbolic expressions constitute postulates that convey standard meangings among scientists everywhere. But considerable misunderstanding prevails over the use of single words or phrases because they lack absolute definitions, and sometimes ambiguity persists even within their context. So it is obvious why there are so many communication breakdowns which lead to misinterpretation and disagreement.

REGARDLESS of word simplicity and familiarity, our language structure permits confusion of meaning between the expression of thought of the speaker or writer and the interpretation given to the statement by the listener or reader. For example, try to evaluate the statement: "Business is bad." The meaning of each simple word seems clear, but does it convey what is really in the mind of the speaker to the mind of the listener? Actually this remark merely offers an abstract expression of high-level judgment. Such a comment originates from Aristotelian two-valued (either -or) orientation which embraces the concept "good or bad", "true or false", "black or white", etc. Non-Aristotelian orientation, such as promulgated by General Semantic techniques, emphasizes an awareness of multi-valued orientation and urges the use of language structure denotative of the many gradations or degrees between the dichtomy of "good" or "bad".

When you say "business is bad" what are you trying to convey to your listener? What does the statement mean to the listener? This abstract conclusion, without extensionalization, can prove meaningless to your listener. It does not divulge any reason for your comment nor make any reference to the events which led you to that evaluation. When you made this simple remark you could have meant that general business conditions are bad; you could have meant that your business is bad compared with the volume of business handled by your competitors within your particular industry; you could have meant that while the volume of your business seems satisfactory, a prevailing "price war" has reduced the mark-up to a point that profits are scant; etc. In fact, your meaning is "foggy" because you used the word "bad" without any extensionalization for your listener to evaluate the interpretation you intended to convey. This simple three letter word "bad" has a "fuzzy" definition in this context because it fails to explain what you desire to relate. It does not show any gradation of meaning, relationship, degree, comparison, etc.

Index

THE word "index" derives from the Latin word "indicare" meaning "to point out." You recognize the vagueness of the word "business" in the simple statement "business is bad" because you are aware that "business[1]" is different from "business,[2]" "business,[3]" etc. You must, therefore, make your referent, the word "business" point out what kind of business you are talking about.

A custom of indexing clarifies and specifies references in communication. Without proper indexing you might permit your listener to apply a different connotation to your referent, causing him to reach conclusions that are false to fact. You need to furnish a better "word map" to describe the "territory" or "business" to clarify your meaning.

Methods of indexing the statement "business is bad," or to give it meaning and communicative import, are illustrated by the following examples. Instead of saying, "business is bad," if you qualify with: "(automobile) business is bad," "(grocery) business is bad," "(drug) business is bad," etc., you index the intent of your statement and make it more meaningful to your listener. Of course, you can further index your comment to create a definite

R. W. PUDER

New Vice President of Materials Handling

S.A.M. National President John B. Joynt has announced the appointment of R. W. Puder as the Society's Vice President of Material Handling. Mr. Puder replaces Matthew J. Murphy.

Mr. Puder was active in the organization of the Society's Material Handling Conference this past Spring, and is currently working on a plan for a Materials Handling program for the Society's chapters. He is Supervisor of the E. I. du Pont de Nemours & Company's Materials Handling and Packaging Group.

Mr. Puder holds a B.S. and a M.S. in Mechanical Engineering, is a member of Sigma XI and an associate member of the American Society of Mechanical Engineers. His industrial experience also covers two years with the M. W. Kellogg Company as a Stress Analyst, four years with the U.S. Air Force, one year as an Instructor of Thermodynamics and Physics, two years with the Texas Company as a Project Engineer on Lubrication Research, and three years with the U.S. Steel's Coal Division as a Senior Mechanical Engineer.

consciousness of abstraction in the mind of your listener by saying, "(retail) business is bad", "(retail *automobile* business is bad", "(retail *new* automobile) business is bad", "(retail *used* automobile) business is bade", "(retail new *Plyford* automobile) business is bad", etc. This method of indexing extensionalizes the connotation of the word "business". It shows how each additional referent modifies the meaning of your statement and identifies the differences in types of business to make your remark more understandable to your listener. This technique applies to any subject or event and its use precludes misinterpretations, vagueness, ambiguity, etc., and permits a better evaluation.

PRACTICE indexing to develop the awareness of differences as a better threshold to understanding. Remember that business[1] differs from business,[2] problem[1] differs from problem,[2] etc., so try the indexing method to emphasize these differences when you speak or write. You will find that this discipline improves the evalution of your statements by your listeners or readers. Obviously, any codification to emphasize differentiation leads to better reception, better understanding and better evaluation. The use of indexes or similar extensionalized devices exercises the human intellect and arouses the evaluative judgment of your listeners or readers and avoids letting their inhibitions dictate only an habitual pre-conceived conclusion when they hear or read a certain word or phrase.

The device of indexing permits you to point out to your listener or reader that the word or statement you use does not allude to a stereotype, or a single reference and classification of a thing, event, or situation. It brings a consciousness to your listener or reader that there are many facets, differentiations, classifications, etc., involved in whatever you are describing.

Date

Omitting time, degree, measurement, date, etc., often cause confusion or misunderstanding about the intention of the speaker or writer. For example, when you say "business is bad" this remark, without a date factor, does not inform the listener what you had in mind when you made this judgmental statement, and allows him to make many inferences or assumptions which might be false to fact. For the statement "business is bad" to have the same meaning to your listener that you have in mind, you should "date" your statement and extensionalize to indicate degrees of comparison, time, etc., such as: "business profits in 1954 were 19 per cent lower than business profits in 1953". You can be more informative if you say: "business profits in 1954 were 19 per cent lower than business profits in 1953, even though operating expenses in 1954 were 12 per cent lower than operating expenses in 1953." To make the statement more meaningful, you might add detailed information about the volume of business obtained by your firm during 1954 and 1953 as compared with the volume of business of your competitors in the same industry for these years. Perhaps further remarks about the general economic conditions would give your statement more significance. Through this method of extensionalization you define what you have in mind and better communicate your thought to the listener. Absence of these extensionalized comments often cause your utterances to lack meaning or impede the understanding of your remarks.

The foregoing illustrations denote that judgmental statements allude to misunderstanding and disagreement because they do not fully describe what you have in mind, or completely outline the facts that you evaluated to reach your abstract conclusion. The situations or events precipitating the statement of a valued judgment should be made known to your listener or reader, as well as known to you, before it is possible to communicate effectively on any subject.

Orient

COMMUNICATION represent more than the making and hearing of audible sounds and the writing and seeing of meaningful letters and symbols. The purpose of communication consists of your attempt, when speaking or writing, to convey a thought pattern in your mind to the mind of your listener or reader. You succeed in this effort only when you use words and symbols which have similar meaning and understanding to both you and your listener or reader because without these qualifications you cannot accomplish communication.

You are obliged to condition the mind of your listener or reader so he becomes receptive to your message. You should create an attitude in your listener or reader that places him in a state of mental "free-wheeling" so he does not have his mind developing what he thinks or wants to say when he should be concentrating on the meaning or significance of what you are saying to him. You must persuade and influence your listener or reader to turn off his mental "record player" when he should have his mental "recorder" operating, so as to absorb what you offer for his consideration. This means that the speaker or writer and the listener or reader must orient themselves to the situation or event about which it is desired to convey a thought pattern.

YOU need to recognize words and symbols as denotative and connotative, and that no single word, phrase, sentence, or event is interpreted the same way by any two people. You should also maintain an awareness that no two persons, events, ideas, problems, etc., are identical. Each receptor of any form of communication affects what he sees, hears, feels, reads, etc., by an orientation, peculiar to himself, which has conditioned his mind and emotions. What an individual sees, hears, feels, reads, etc., is affected by his thinking, emotional attitude, self-moving and electro-colloidal reactions, that are constantly interacting to the generalized meanings of words, symbols, and events to which he is or has been exposed. An awareness that these activities occur in the mind of your listener or reader helps to orient yourself to the responsibilities of the communicative process.

Conclusion

Communication failure results too often from the inability of the listener or reader to understand what the speaker or writer means to convey. For the listener or reader to comprehend fully what you say or write, present your statements in a verbal map or pattern similar to what goes on in your mind. If you want to communicate effectively, pursue the *D I D O* technique—Define, Index, Date, and Orient your statements to eliminate semantic blockage. This method of communication helps convey your thoughts into the mind of your listener or reader with the least amount of confusion, and promotes understanding and agreement. Moreover, you will achieve more positive action and better reaction when you use this technique to delete foggy statements from your communications. If you use this formula in your communicative efforts, you will create a style for your subordinates to follow, and it will improve the lines of communication in your organization ■

The business manager is a realist. He is a man of action and practical affairs charged with the heavy responsibilities of attaining the profit and other goals of his organization. In this effort, he realizes fully the importance of obtaining the maximum realization of the human resources available to his organization. Accordingly, he is keenly aware of the men in his organization, and he is an avid student and observer of human nature. For him, the poker game is a human relations laboratory.

Basic Concepts Of Human Effectiveness In Business

By Joseph Lazar

Air Force Institute of Technology
Wright-Patterson Air Force Base

IN his interest and knowledge of human nature the business manager, of course, is not alone. The scholar in the universities has also been studying and experimenting and building a body of scientific knowledge concerned with human behavior. The business administration scholar, the sociologist, anthropologist, clinical psychologist, social psychologist, psychiatrist, physiologist, political scientist, historian, economist, engineer, operations research scientist, and many others, have been accumulating and depositing their findings and insights into the matrix of knowledge of human and organizational behavior.

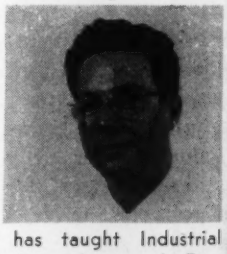
The business manager is a man of action—a leader and administrator—and talks the language of action. The scholar speaks the language of the specialist. The problem of communication amongst scholars and between the business manager and scholar is a real one. This paper seeks to formulate, for the administrator as well as the scholar, a usable theoretical framework of basic dynamics of human behavior in an organization. This framework is intended to offer a view of relationships and processes suggestive of hypotheses or "hunches" which may be empirically investigated with an eye toward the improvement of organizational and human effectiveness.

It is assumed that individuals within organizations generally function consistent with the following theoretical process, and that this process may be understood through certain basic concepts.

I. *Human Expectation: The Basic Concept.* "Order is Heaven's first law," said Pope in his *Essay On Man.* Human expectation is a total process whereby individuals become integrated personalities, learning what to anticipate of themselves and of the external world. The primeval chaos in which the human organism first saw light becomes regular, orderly, harmonious, concretely structured, and understood to the extent that expectations evolve. Man's need to discover order in the universe and in himself seems partially satisfied as his "expectations" are subjected to different kinds of realization or "proof". Man has a need for structure and for reality-testing. The drive of the human race for survival may be thought of as an ingredient of the process whereby human expectations become formulated. Man's expectations and the proofs by which they are tested are of paramount importance to his existence.

II. *Human Perception: Pathway to Expectation.* The concept of perception may be thought of as the process of be-

**Because of the generality of concepts used in this paper, and for easier reading, specific and detailed research references are omitted.* The Handbook of Social Psychology, *edited by Gardner Lindzey of Harvard University, and published by Addison-Wesley Publishing Co., Inc., Cambridge 42, Mass., (1954) (2 Vols.), is rich in scholarly analysis and bibliography, and should be of great value to the student interested in pursuing the subject matter. In addition, the reader is especially referred to the work of Carl R. Rogers of the University of Chicago; to the work of E. Wight Bakke and associates at Yale University; and to the work of Dorwin Cartwright and the Research Center for Group Dynamics at the University of Michigan. The work of Chester I. Barnard, Elton Mayo, and many others, of course, contributes to the setting of this paper.*



JOSEPH LAZAR

Professor Lazar has taught Industrial Management, Business Law and Economics and Political Science. He has been Assistant Supervisor of Wages and Working Conditions for the Norfolk & Western Railroad. He is a member of the American Business Law Association, American Arbitration Association, American Society for Insurance Research, Society for Applied Anthropology, Industrial Relations Research Association, Operations Research Club of Ohio, and Omicron Delta Kappa. He is the author of **Readings and Materials in Business Law, Due Process on the Railroads** and co-author of **Industrial Relations and the Government** and **Recent Cases and Materials in Business Law.**

coming aware of one's self and of one's external environment. A person may become easily aware of his thirst, or of his hunger, and be quick (too quick) to see the mirage in the sky or the distant rock as water and sleep, drink and food. The biological needs for food, sleep, and reproduction, for example, affect the individual's awarenesses of external objects that may satisfy such needs. Need tensions are reduced through need satisfactions, and the process of perception may be viewed as a mechanism for tension-reduction or need-satisfaction.

Company X receives a large order for machinery it manufactures. Foreman Smith perceives the order as leading to an improved profit position for the company, possible expansion; higher salary, and possible promotion to superintendent.

ADDITIONALLY, individuals tend to avoid seeing themselves in such a light as may threaten the images they hold of themselves. Accordingly, they may filter through or screen out those "impurities" in reality which may be repugnant to their self-esteem. So viewed, distortions of perceptions become easily understood; for the need-systems of different personalities may produce different perceptions of the same external object or event. A person sees what he wants or needs to see—if he can possibly do so.

President Jones has now installed himself as a kindly father. He regards himself as impartial and just to his employees. To meet competition, President Jones has installed new machinery. Younger workers, being more efficient, are hired and placed on this machinery. Older workers are furloughed. President Jones sees no inequities in the situation.

When the uncorked bottle of ammonia is placed under the individual's nose, he is sure to perceive that it is not the bottle of whiskey he thought it was from a distance—assuming that his sense of smell is normal; and the distant "Marilyn Monroe" or "Rita Hayworth" lying far-away on the beach becomes recognizable as the hoary "grand dame sans sex appeal"—assuming that vision is normal and sex appetite is not too strong. Or the obvious mistake or miscalculation he has made is not recognized but is regarded only as an act of proper judgment. Perception, accordingly, may be viewed as a resultant of the degree to which individuals have certain needs, and the degree to which there is permitted an inflow or accumulation in the individual of in-puts of information which structure and define environmental ambiguities. The degree to which expectations become justified may be a function of the degree to which perceptions are valid. Thus, one's expectations of achievement of person or group depends on how valid the perceptions may be of the particular person or group.

CHAPTER MEMBERSHIP STANDINGS AS OF September 1, 1956

New York	401	Georgia	73
Philadelphia	373	Columbus	69
N. New Jersey	344	Knoxville	69
Cincinnati	304	Richmond	69
Lancaster	281	Reading	67
Chicago	270	Puerto Rico	62
Cleveland	266	Alabama	61
Pittsburgh	243	Clearing	61
Washington	198	Trenton Del. Val.	61
Detroit	192	Greenville	59
Boston	189	Hartford	57
San Francisco	173	Central Penna.	54
Milwaukee	159	Calumet	52
Los Angeles	144	Western Mass.	51
Dallas	143	Twin City	47
Montreal	120	Central N. Y.	46
Worcester	120	Charlotte	44
Hudson Valley	119	Fox Valley	44
W. No. Carolina	117	Madison	40
Indianapolis	116	Lehigh Valley	38
Raritan Valley	113	N. Mississippi	37
Long Island	104	St. Louis	35
Binghamton	102	London, Ont.	34
Baltimore	99	Nashville	33
Sacramento	99	New Orleans	33
New Haven	96	N. E. Penna.	32
Greensboro	95	Athens	30
Kansas City	86	Portland	29
Wilmington	84	Louisville	15
Bridgeport	78	Stamford	12
N. Alabama	76	Non-Chapter	93
Providence	76	Non-Resident	91
Dayton	75		

III. *Communication: Tool for Perception.* Communication is the process of making available to an individual in-puts of information. Elements in the process include: (1) the human source, or sender; (2) the information, or message; (3) the communication channel, or medium; and (4) the human receiver. Defects in the communication process may be the result, amongst other factors, of (1) initial faulty perception by the sender, (2) error in formulating the message, (3) noise or other interferences in the communication channels, and (4) faulty perception by the receiver. Fortunately, it is possible to detect error or distortions of communications, to some degree. Thus, the receiver of the message may in turn become a sender of the message which he has perceived, and the original sender of the message may become a receiver of the message which he initiated. Brown sends a message to Smith, and Smith sends the identical message back to Brown. This feed-back of the original message may enable the original sender to perceive degrees of similarity or difference in the messages and offer clues for discovering the factors which may have produced the distortions. In teaching and training methods, it is common, for example, for the instructor to ask the pupil, "repeat what I said," and for the instructor to ask the pupil to demonstrate by specific operations the substance of the instructions given.

Original error by the sender in perceiving the situation which is the subject of the message he formulates is not easily corrected. Jones sees a purchase order calling for 10,000 units, but gives manufacturing instructions for 1,000 units. The feed-back message, 1,000 units, may or may not alert Jones to his error.

Feed-back devices may provide reality-tests for both the sender and the receiver and enable them both to have a greater confidence in their perceptions and in their communications system. Accordingly, perceptions based upon both the forward and feed-back communications process are reality-tested to a degree and provide additional support for the development of expectations.

IV. *The Role: Unit of Organizational Structure.* Complex organizations are composed of numerous interlocking and specialized functions, coordinated and directed towards attaining the goals of the organization. When pictured on paper, the organizational structure may be charted as made up of interrelated positions and job descriptions. In reality, however, individuals perform the functions of the positions diagrammed on the organizational chart, and, on occasion, the functions actually performed by a person are quite different from what may be pictured on the organizational chart or in the job description.

THE organizational structure may be pictured as consisting of interrelated positions or statuses and may be described in terms of collections of reciprocal right-duty relationships. The right-duty relationships involve groupings of learned behaviors appropriate to the position or status, and these groupings of behaviors or actions constitute roles. Roles such as president, vice-president, general manager, fore-

man, timekeeper, pressman, die-maker, etc., when analyzed in terms of their behaviors or actions, provide a description of the organization being studied. The part or parts each individual plays in performing the functions of his position may be regarded as the individual's role or roles. Accordingly, the sum of the roles played by all of the individuals in the organization may be thought of as constituting the total functioning organization.

V. *The Role: Product of Expectations.* Role behavior is learned behavior. As individuals go about learning their roles, they act on their perceptions of the roles. They continually look for cues to test out whether their perceptions of the roles are accurate. The process of role definition may be viewed in part as a function of interaction amongst the individuals in a situation. Thus, where two persons are in a role-role relationship, the foreman may make a statement to the worker, "Attach this wire to this bolt at this point." The foreman's statement may bring the worker's response, "Let Bill do that job," and this response may in turn stimulate the foreman to say to the worker, "I'll have you discharged if you don't do what I say," whereupon the worker responds by accepting the foreman's statement or by refusing to do so and running into trouble. The foreman-worker roles become defined in the interaction process, and the expectations of the persons involved in the particular situation are perceived and communicated to one another. Their perceptions become stabilized and orderly as the perceptions are reality-tested. They have learned what is expected of them in their roles, and they tend to behave accordingly. In a sense, it may be stated that the perceived expectations of the role define the role.

VI. *Creative Shaping of Role Behavior. Step 1. Reality-Testing the Role.* If it is reasonably accurate to say that the perceived expectations of a role define the role, then the wise administrator will endeavor to find out whether the prescribed content or job descriptions of the formal paper organization correspond with the role expectations of the individuals in the organization. The administrator will continually reality-test his own perceptions of the roles in his organization, including his own role.

The reality-testing of perceived expectations of a role would, it is suggested, involve the following elements: (1) observation of the actual behavior of the person in the role; (2) statement by the person in the role of what he perceives is expected of him in the role; (3) statement by others in interlocking roles with the examined role as to what they perceive is expected of the individual in the role in question.

To the extent that discrepancy may exist between formally defined roles and the actual role expectations and behavior of the individuals involved, there should be a further searching for the factors involved in the discrepancies.

(a) *Communication and Role.* Is the discrepancy between the formally defined roles and the actual role expectation and behavior of the individuals involved due to improper communication? The elements of the communication system bear examination. Is there an adequate perception of the formally defined position? Is the verbalization or description of the formally defined position free from distortion? Has the formally defined position been transmitted through channels free of interference (reinterpretation) or distortion? Is the recipient of the communication, the role player, technically and personally capable of making an adequate perception of the formally defined position?

Superintendent Smith is told by Foreman Jones that the work is not completed because of worker shortage. On inquiry, the personnel manager states that he sent applicants for the jobs to Foreman Jones. Foreman Jones was not aware that the personnel manager did not have the authority to hire and that he, as foreman, did possess this authority.

(b) *Influence and Role.* Is the discrepancy between the formally defined roles and the actual role expectations and behavior of the individuals involved a result of contamination from other individuals in the organization? If other individuals perceive one's role as different in certain respects from the formally prescribed role, then to the extent that such others' perceptions are used as a basis for reality-testing by the role-testing individual, such interpersonal behavior may produce variant role expectations.

Foreman Brown is a new man. He observes Foremen Jones, Smith and Clark as they discharge workers without any consultation with Superintendent Wilson. Previously, there had been a walkout of the workers growing out of a discipline grievance under the union contract, and the foremen had been specifically directed to consult with Superintendent Wilson before taking action. Foreman Brown, taking his cues from the other foremen, discharged unsatisfactory workers without consulting Superintendent Wilson.

A tests out his own role perceptions through following cues from *B* or others, and when *A's* role behavior conforms with *A's* perceptions of *B's* or others' cues, *A* has developed a role expectation. Thus, it may be said that *B* or others have helped to structure *A's* role. In other language, *B* or others have *influence* on *A* in the situation.

(c) *Authority and Role. A*, accordingly, may be influenced in his role behavior by his perception of gentle cues from *B* or others. If, as is generally the case, *A's* role expectations have been explicitly and plainly defined, on enter-

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ing the organization, to include the acceptance of cues or suggestions or direct commands from *B* or others, it may be said that *B* or others have *authority* over *A* in the situation. Bill, the new man, is told by the Superintendent, "Do what Foreman Frank tells you. He is your boss."

The ideas of influence and authority have in common the development of expectations in an individual through the process of affecting the individual's perceptions. The idea of influence is more subtle than authority, in that influence is more clearly seen as being accepted and consented to by the individual in his efforts to discover his role expectations. Authority, on the other hand, is open and directly visible as part of the expected role behavior of another. This other, who has the authority-role, is perceived as the source of role-shaping expectations.[1] Of course, unless an individual perceives the role-authority, and unless he perceives the kinds of cues which evidence the role-expectations from the person in the authority-role, he will not be capable of developing the expectations of his own role as formally defined. Thus, Jack, the new man, is asked by Foreman Harry, from another department, "Would you mind polishing these fixtures?" Jack does not understand that he has received an order, and that Foreman Harry has authority to give such orders.

(d) *Personality and Role.* Is the discrepancy between the formally defined roles and the actual role expectations and behavior of the individuals involved due to personality factors which distort or block adequate perception and reality-testing necessary for the development of role expectations? Conceivably, the individual may fail to perceive certain aspects of his role performance as being inadequate. The threat to his self-esteem may be too great to allow him to see that what he does is inferior or inadequate. Or he may consistently perceive his fellows as approving—or as disapproving—what he does, because of his own great need for approval or disapproval as the case may be. Or tasks which may be expected of the role-player are not perceived by him because they are "bad", "dirty", or "menial", or in other ways inconsistent with his self-image of "good", "clean", "important", etc.

[1] *Cf. Chester I. Barnard,* The Functions of the Executive, *Cambridge, Harvard U Press, 1938, p. 163; Herbert A. Simon,* Administrative Behavior, *N. Y., Macmillan, 1947, p. 125.*

Bill, the new foreman, is a recent engineering graduate, bright and shiny. Superintendent Kopek, soon to retire, wears old overalls, is a high school graduate, and has learned the business by trial and error. Bill tries to avoid certain tasks around machinery and is continuously running into disagreements with Kopek over the what and how of the job. Bill has difficulty accepting his role as defined by Kopek.

VII. *Creative Shaping of Role Behavior.*

Step 2. Including Organizational Goals in Roles. It is submitted that an important step in achieving organizational goals is to include organizational goals in the role expectations of the individuals in the organization.

Strange as it may seem, organizational goals are often not included in the expected role behaviors. Ordinarily, there is a tendency for job descriptions and paper organizational charts to formulate role expectations in terms of enumerated tasks and functions. Role expectations, including perceptions of authority and responsibility, may at times rigidly compel the individuals carrying out their roles to behave without regard to the organizational goals—for the goals are not included in their role expectations. *Top* management, of course, has role expectations which *do* include the achieving of organizational goals as such; i.e., competitive position, profit targets, production targets, sales goals, etc.

How are organizational goals and objectives to become included in role expectations of all the individuals in the organization? It is necessary, of course, that the individuals actually perceive such objectives, and that the individuals perceive such objectives as standards and values by which they each measure their own performance and the performance of others with whom their roles interlock. Techniques of group-participation and group-involvement are useful in formulating objectives. The notion of management by objectives, whereby all personnel participate in the fashioning of objectives, is pertinent here.[2]

The goal-perception of the individuals involved will depend, in large part, upon the elements determining total adequacy of the communication system:

[2] *See, in this connection, Peter Drucker,* The Practice of Management, *Harper, 1954, Ch. 11.*

S. A. M. 1955-56
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(1) Is there adequate perception of organizational goals and objectives by the sender (top management)? (2) Is there an adequate formulation or verbalization of the message (of organizational goals)? (3) Is there adequate transmission of the organizational goals message to the individuals concerned? (4) Is the recipient of the message technically and personally capable of reaching an adequate perception of the organizational goals? Of course, to the extent that goals are defined through techniques of group-participation, goal-perception as well as goal-involvement by the individual may be maximized.

VIII. *Creative Shaping of Role Behavior.*

Step 3. Bringing Actual Role Performance Into Conformity with Role Expectations. Role expectations may not be fully realized in actual role behavior. Although a person adequately perceives the role behavior expected of him, and although he is capable of performing in the situation, he may nevertheless refuse or fail to carry out, to a degree, the expected activities. Proper motivation, it may be said, is lacking. The great question is: To what degree, if at all, is it possible to achieve in the individual the motivation necessary to bring his role behavior into conformity with role expectations?

Meaningful, purposeful behavior is goal-directed behavior. A person moving toward a positive goal or away from a negative goal may be said to be acting in a motivated manner. If the individual's role already includes the goals of the organization, then the performance of his role will bring the organization closer to attaining its goal. But if the individual, himself, does not desire the goals of the organization, it is likely that he will not strive to attain full role performance. The goals of the organization and the goals of the person, must to as large a degree as possible, be related so that efforts bringing the organization closer toward its goals will also bring the individual closer to his own goals, and vice versa. *The task of coordinating organizational goals and personal goals is the function of motivation.*

Organizational goals, relatively speaking, may be easily defined. Personal goals, on the other hand, are highly complex. The mystery of the human personality perhaps can be known only to man's Creator. The lessons of history combine with the teachings of psychology and the other human sciences, however, in pointing to man's increasing efforts to discover and establish order and harmony in the Universe and in himself. The individual's self-image and his struggles toward self-realization—to bring his actual behavior and total performance as near to his evolving self image as possible—are elements of human nature that can be readily observed. Man strives toward self-actualization. Realization of the potentialities inherent in the human protoplasm may be said to be a prime goal of human existence.

Accordingly, to the extent that the realization of the goals of the organization include the capacity to assist the individual in his strivings toward self-realization, toward achieving his inherent potentialities, it may be said that conditions have been established for the kind of motivation which will bring the individual toward active fulfillment of the role behavior expected of him. In such a setting, realization of the goals of the organization is as passionately worked for by the individual as is realization of his own personal goals. Organizational activity supplements his personal activity. The values of the organizational goals are his own personal values. The great task of motivation in this way becomes transformed to the task of coordinating the released energies of the persons striving voluntarily toward fulfillment of their personal aspirations and self-actualization. ■

Positions Wanted or Open
See Page 31

S. A. M. Members Invited To Olympic Games In Melbourne

AMONG the many sports fans who will visit Australia this year to enjoy the Olympic games, which will be held in Melbourne from November 22 to December 8, there will, perhaps, be some S.A.M. members, and among them some Methods Engineers.

The Australian Methods Engineers Association of Melbourne extends its greetings to S.A.M. members, and particularly to the American Methods Engineers among them, and offers the hospitality of the association's facilities and the time of its members to them during their visit. The AMEA members of the Melbourne Division offer to supply motor trips to various parts of the Australian continent for Methods Engineers guests.

S.A.M. members who go to Melbourne need only to show proof of their membership in the Society to the AMEA office to obtain the hospitable facilities offered.

CIPM Reports . . .

About the Council for International Progress in Management

FOR a number of years, CIPM has been "reporting" each month in ADVANCED MANAGEMENT on the international management conferences and projects in which it participates and on the growing size and scope of its own operations and those of CIOS — the Comité Internationale de l'Organisation Scientifique, in which it is the American member. Now perhaps it's time to go back to the beginning and explain exactly what CIPM is, what it does, and what its aims and policies are.

What It Is

The Council for International Progress in Management was founded in 1933 by a group of leading American management associations, of which S.A.M. was one, to give these associations an official international representative. CIPM is the only American management organization operating exclusively in the international field. Since 1933, its membership has grown to include leading corporations and industrial firms, as well as a number of schools and colleges of business administration.

The Council is the official American representative of CIOS, which has member associations in 27 countries in Europe, the Western Hemisphere, the Far East, and Australasia. Also, the Council is a founding member of the Pan American Council of CIOS (PACCIOS), the Western Hemisphere regional organization of CIOS which has affiliates in Canada, Brazil, Chile, Argentina, and Mexico. It is in connection with its membership in PACCIOS and CIOS that CIPM is organizing the American participation in the first Inter-American Management Conference, to be held in Santiago, Chile, on November 2-17, 1956, and the XIth International Management Congress, to be held in Paris on June 24-28, 1957.

What It Does

In addition to its role as the American representative at international conferences, the Council plays a dynamic and creative part in the implementation of the U. S. Government's Technical Assistance Program. Since 1950, under the auspices of this program, it has planned, organized and conducted study tours for over 1200 management representatives from Europe, Latin America, and Asia, who have come to this country for periods of from three weeks to nine months to study the "how" and the "why" of American management. These groups have not been concerned with a study of a particular process or industry, but rather with the general climate in which American management operates and the management principles and practices that create this climate.

Another aspect of the CIPM management exchange program is the Council's recruiting and organizing of groups of American executives to hold seminars with their management counterparts in other countries. During the last five years, the Council has recruited over 100 men who have composed some 34 teams that have held seminars in Europe, Latin America, and Asia, thus enabling executives in these countries to meet in small groups with American management leaders to exchange views and discuss common problems. The results of this program, although often intangible and hard to measure, are nevertheless becoming increasingly evident. Turkish production manager has been able to grasp the meaning of preventive maintenance; in Belgium, industrialists, who in 1952 were astonished to find that the very fact of their meeting to discuss common problems was often beneficial to their businesses, have now put in a many-sided productivity program that they describe as "a sound framework for the development of management ideas in Europe."

For the past year and a half, the Council has had three management experts in Finland who are acting as consultants to Finnish industry. This entire project is privately financed by groups in the United States and Finland who are interested in the industrial development of that country. By working with the managers of leading Finnish industries, the Americans are not only assisting these firms in their production and marketing problems, but they are also training Finnish managers to carry on the same kind of work after the termination of the American project.

Aims and Policies

CIPM is presently engaged in the development of a research report on how to develop more good managers overseas. It is the Council's belief that by reaching the individuals who are the present and future managers and the industrial leaders in countries of the free world, and by helping them to manage their enterprises in a way that is both productive and beneficial to the industrial community in which they operate, CIPM is making a real contribution to stabilized economic conditions throughout the world.

Jane Dustan, *CIPM Editor*

S.A.M. is a charter member of CIPM, the Council for International Progress in Management, the American non-profit, non-political organization devoted to the practice of scientific management on the international level. CIPM is in turn a member of the International Committee of Scientific Management (CIOS) which represents the organized management societies of twenty-six nations.

CHAPTER MEMBERSHIP STANDINGS

as of August 1st, 1956

New York	404	N. Alabama	75
Philadelphia	374	Georgia	72
Northern N. J.	349	Columbus	69
Cincinnati	306	Knoxville	69
Lancaster	279	Richmond	69
Chicago	276	Reading	66
Cleveland	268	Clearing	62
Pittsburgh	240	Alabama	61
Washington	200	Trenton-Del. Val.	61
Detroit	197	Greenville	59
Boston	192	Hartford	55
San Francisco	173	Central Pa.	54
Milwaukee	158	Calumet	52
Los Angeles	145	Western Mass.	50
Dallas	143	Central N. Y.	45
Indianapolis	119	Charlotte	45
Worcester	119	Twin City	45
Hudson Valley	118	Fox Valley	44
Montreal	118	Lehigh Valley	40
Western N. C.	118	Madison	40
Raritan Valley	108	North Miss.	37
Long Island	105	St. Louis	37
Baltimore	99	London, Ontario	34
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New Management Writing . . .

THE STAFF ROLE IN MANAGEMENT

By Robert C. Sampson. Published by Harper & Brothers, New York, 1955. $4.00. Pp. 226 & xii.

THE STAFF ROLE IN MANAGEMENT is a book that should be read by every staff executive and line executive.

As the author, Robert G. Sampson, says, "This book is intended to be provocative. . . ." As in the case of any provocative writing, there will be a degree of agreement and a degree of disagreement on the part of any reader. The book, however, does set forth—in an interesting and thought-provoking style—a reminder of the role of staff in modern management.

The author stresses the differences between management by technique and management by managing. He feels that staff functions of managements are in what he terms "a welter of confusion." He feels that line executives are questioning the effectiveness of staff functions, both as to their intrinsic qualities and the ways in which they are being administered.

It is true that available research information tends to prove that there is a considerable degree of friction and resentment between line management and staff management, in spite of the fact that the staff concept has been liberally used in management for several decades.

Probably most staff people firmly believe that they have not strayed from the classic concept of staff-line relationship, but there is reason to believe that staff executives have taken over more and more of what was the once considered line prerogative.

Mr. Sampson expresses his concept of the staff as follows: "The staff man does not look upon himself as a teacher but rather as a counselor. He subscribes to the fundamentals of learning. He keeps decision-making in the hands of the executive for he believes that self-development, growth, and the maturing of a personality all require that the executive himself define his objectives, clarify his thinking, make his choices, and solve his problems. The executive does not learn by discussing academic issues. He learns by doing, with the counsel of the staff man."

The book points out that much of the trouble with so-called staff functions is due to the fact that people are so anxious about WHAT a particular staff function should do, they omit altogether consideration of HOW it should be done.

The chapter on "Making a Situational Analysis" is particularly good. He takes a theoretical staff representative from the time he is told to make an investigation, through an analysis of the HOW to approach the situation and HOW to obtain the results his superior expects, while maintaining a truly staff relationship with the line people involved.

The author admits, "I sometimes wish the word 'counseling' had never been invented. Because of different ways in which the word has been used, it has aroused prejudices which have blocked its general acceptance. However, there is no satisfactory substitute for it; no other term so aptly designates the role of the staff representative." He points out that counseling with an executive, counseling with groups of people, and counseling with first-line supervision gets the staff results without creating staff antagonism.

In the final chapter he deals with the responsibility of the line administrator to properly use his staff—the importance of judging staff members in light of their counseling responsibility, rather than in line with concrete results which should be attributed to line management properly using staff help.

The average line executive reading the book will probably agree with the author and wish that his staff help would abide by Mr. Sampson's concept. The average staff person reading the book will probably feel that the author has gone too far in depriving staff of some reasonable amount of authority.

The book is worth while reading—and rereading—to help us in keeping in proper focus the important relationship of line and staff.

James E. Newsome
Johnson & Johnson
Chicago, Illinois

THE PSYCHOLOGY OF OCCUPATIONS

By Anne Roe, John Wiley & Sons, New York, 1956, pp. xii and 340. $6.00.

ORGANIZING and summarizing the results of much scattered research in occupational testing, this book reveals the types of aptitude and personality testing which have proven most useful, and fits the use of tests in business into the whole broad picture of vocational guidance and clinical psychology.

CHAPTER PERFORMANCE AWARDS REPORT

July 1, 1956 - July 31, 1956

Georgia	1362	Binghamton	775
Boston	1306	Montreal	695
Detroit	1292	Worcester	650
Milwaukee	1248	Western N.C.	600
Kansas City	1222	San Francisco	591
Baltimore	1200	Sacramento	450
Lancaster	1196	North Ala.	400
Providence	1190	Philadelphia	292
Portland	1152	Athens	
Reading	1146	Calumet	
Hudson Valley	1145	Central N. Y.	
Washington	1130	Central Pa.	
Bridgeport	1128	Charlotte	
Raritan Valley	1126	Cincinnati	
New Haven	1116	Columbus	
Greensboro	1114	Dayton	
Nashville	1104	Fox Valley	
Chicago	1086	Indianapolis	
Cleveland	1069	Lehigh Val.	
Northern N. J.	1068	London, Ont.	
Alabama	1048	Long Island	
Tren. Del. Val.	1027	Louisville	
Wilmington	1024	Madison	
Los Angeles	1005	New Orleans	
Clearing	1000	New York	
Knoxville	1000	North Miss.	
Northeast'n, Pa.	1000	Pittsburgh	
Greenville	900	Puerto Rico	
Hartford	900	St. Louis	
Richmond	899	Stamford	
Dallas	896	Western Mass.	
Twin City	823		

Division of labor and the role of occupations in society and in the life of the individual are first discussed. Then the measurable test results on individual differences of a physical, psychological, social, educational, and biographical nature are presented. The author develops a two-way classification of occupations, based on eight types of occupations distinguished by the primary focus of activity and on six levels of functioning within each type of occupation. Working within this pattern, she discusses what tests have shown about individual differences within and between the major occupational groups. Finally, studies of occupational choice, progress in the occupation, and the effect of occupation on other aspects of living are presented and evaluated.

A. H. Maslow's theory of personality is adopted to provide coherence to the discussion of the satisfactions sought in different occupations. According to Maslow, the basic human needs, arranged in the usual order of potency, are:

1. The physiological needs.
2. The safety needs.
3. The need for belongingness and love.

Chapter Performance Awards Recipients 1955-1956

Hudson Valley	1st Place Award — Harrington Emerson Trophy
Knoxville	2nd Place Award — Ordway Tead Bell and Gavel
Providence	3rd Place Award — Banner
Sacramento	4th Place Award — Banner
Washington	5th Place Award — Banner
Lancaster	6th Place Award — Banner
Wilmington	7th Place Award
Greensboro	8th Place Award — Banner
	President's Award — Scroll (for the greatest increase in Chapter standing)
Philadelphia	9th Place Award
W. No. Carolina	10th Place Award

CHAPTER HONOR ROLL

CONGRATULATION to the members and their leaders in the Chapters' Membership Campaign.

Quotas at end of 1955-56 fiscal year:

	Per cent		Per cent
Sacramento	350	Los Angeles	55
Puerto Rico	266	San Francisco	54
Greenville	157	Washington	43
Hudson Valley	140	Greensboro	36
Providence	140	Cleveland	31
Wilmington	140	Raritan Valley	31
Clearing	137	Western Mass.	29
Montreal	133	Binghamton	21
Bridgeport	130	Georgia	18
Madison	120	Indianapolis	17
Fox Valley	116	Dallas	14
Twin City	116	Pittsburgh	14
Baltimore	115	Central Pa.	12
Columbus	100	Boston	11
Knoxville	100	No. N. J.	10
N.E. Pa.	100	Reading	10
W.N. Carolina	100	Milwaukee	9
Lancaster	86	New York	3
Philadelphia	86	Cincinnati	2
Nashville	60		

Quotas at start of 1956-57 fiscal year:

	Per cent
Portland	75
Central N. Y.	43
Charlotte	28
Hartford	22
Raritan Valley	21
Wilmington	21
Binghamton	18
Reading	18
Georgia	17
London, Ont.	16
Western Mass.	11
Greenville	10
North Alabama	8
San Francisco	7
Montreal	5
Lancaster	4
Milwaukee	4
Washington	3

4. The need for importance, respect, self-esteem, independence.
5. The need for information.
6. The need for understanding.
7. The need for beauty.
8. The need for self-actualization.

Lists of basic needs like this often crop up in company human relations programs. The author cites several studies of occupations as sources of need satisfaction, but concludes that we are largely ignorant of the nature of this relationship.

Typical of the author's scientific approach and unwillingness to go beyond the established evidence, are her striking conclusions on the effect of psychological differences on occupations. "We do not have occupational data based upon an adequate theory of the nature and development of personality, but we do have strong indications that occupational preferences are closely related to different aspects of personality. The relationship has so far been most thoroughly studied in terms of interests. These are more important as determiners of the kinds of occupations that an individual will enjoy and be successful at than are intellectual factors. In addition, attitude and masculinity-femininity scales have shown such relationships. A beginning has been made with clinical studies, and these offer many promising leads for a better understanding of these relationships." Time after time, the author's survey of the field demonstrates how little we really know about occupational psychology and vocational preferences, and leaves the reader wondering just how significant many of the testing programs which have been developed in business and industry really are.

Managers might wish that more space had been devoted to the studies which have been made of their occupations, which fall within the "organization occupational group," including those occupations "concerned primarily with the organization and efficient functioning of government and of commercial enterprises." However, in such a treatment as this we cannot expect emphasis on any one occupational grouping, and perhaps the statistically significant studies reported have been few and far between. After an interesting discussion of the research, the author reports "This Group appears on the whole to be around the mean in many personality and biographical characteristics, but at the upper levels Kuder Persuasive scores are high, and dominance probably is also. In many occupations in the Group Clerical, aptitudes are of great importance, but mechanical, scientific, and artistic interests are notably lacking."

The book is well organized and written and thoroughly documented with a glossary on tests and adequate references at the end of each chapter. It is full of insights and interpretations as well as facts which should be of great interest and value to anyone concerned with occupational testing. Both vocational guidance and employee selection will be done with considerably more humility and less reliance on tests alone by anyone who reads this book.

Joseph H. Jackson